






DEPARTMENT OF RURAL ECONOMY.  
UNIVERSITY OF ALBERTA  
EDMONTON, — ALBERTA  
T6G 2H1



Digitized by the Internet Archive  
in 2017 with funding from  
University of Alberta Libraries

<https://archive.org/details/hornbrook1981>







THE UNIVERSITY OF ALBERTA

RURAL-URBAN POPULATION CHANGE IN ALBERTA: 1956-1979

by

ROBERT HORNBROOK

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE  
OF MASTER OF SCIENCE

IN

RURAL SOCIOLOGY

EDMONTON, ALBERTA

SPRING, 1981



## ABSTRACT

This thesis analyzed the population growth patterns of places located in the province of Alberta between 1956 and 1979. The study looked at numerical population figures, percent change in population and percent of total population growth for the long term (1956-1979) and in each of the five year periods 1956-1961, 1961-1966, 1966-1971, 1971-1976, and 1976-1979. The central focus of this research was to determine the differential growth patterns in rural and urban places. In addition, the relationships between population growth and four selected variables; (1) distance to the nearest dominant urban places, (2) regional location; (3) central place status, and (4) size of place were examined.

Rural and urban places were found to have significantly different population growth patterns. Over the long term rural places declined and urban places increased substantially. In the 1971-1976 and 1976-1979 periods, however, there were important differences in the growth patterns of rural and urban places. During these periods rural areas increased in population reversing the previous downward trend. Urban areas, while continuing to increase had a substantially smaller proportion of the total growth. Most importantly, between 1976 and 1979 there was a reversal in the traditional rural to urban trend. In this period





non-metropolitan areas of Alberta increased by 11.39 percent while metropolitan areas increased by only 10.36 percent. This change may well signal the end of rural decline in Alberta.

The general relationship found between population growth and distance to the nearest dominant urban place was a U-shaped relationship, with places near to and far from the nearest dominant urban place growing faster than those inbetween. As well, places located in urban areas were more likely to increase in population than agricultural or resource regions in the long term. In the 1971-1976 and 1976-1979 periods, however, the proportion of growth occurring in agricultural and resource regions increased substantially. With respect to central place status it was found that non-central places increased in population faster than central places but that central places accounted for the largest percent of total growth. Finally, population growth tended to occur in very large places (over 100,000) between 1956 and 1979. There was, however, a proportional shift in population to smaller places after 1971.

There were very important and pervasive changes in the population growth patterns of places located in the province of Alberta after 1971. These changes saw rural places increasing after periods of decline. Non-metropolitan areas expanding more rapidly than metropolitan areas for the first time. Agricultural and resource regions substantially



increasing their proportional share of population growth. Central places becoming proportionally less important as population growth centers. Smaller and middle sized places becoming more attractive as places to live. What these changes, in the population growth patterns of places in Alberta, portend for the future is still uncertain. These changes, however, are already having an impact and will undoubtedly have an exceedingly and increasingly important impact on the human settlement patterns and human well being of Albertans in the future.





Dedicated to my wife Barbara Albert.



## ACKNOWLEDGEMENTS

It is a pleasure to thank the people who have made this thesis possible.

Special thanks to my thesis supervisor, Daryll G. Murri, for his thoughtful help and guidance. Special thanks are also extended to Dr. Dhara S. Gill, Dr. Allan A. Warrack, and Wayne W. McVey, my thesis committee members, for their contributions which facilitated the completion of this thesis. Thanks also go to the Department of Rural Economy Staff for their valuable support.

I am deeply indebted to Alberta Agriculture for the education leave which enabled me to pursue this thesis.



# TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
I	OVERVIEW . . . . .	1
	INTRODUCTION . . . . .	1
	OBJECTIVES . . . . .	4
II	LITERATURE REVIEW. . . . .	6
	INTRODUCTION . . . . .	6
	THE REVERSAL . . . . .	10
	RELATED FACTORS. . . . .	25
	Distance to the Nearest Dominant Urban Place . . . . .	26
	Regional Location . . . . .	31
	Central Places. . . . .	33
	Size of Place . . . . .	37
	HYPOTHESES . . . . .	40
	Rural - Urban . . . . .	40
	Related Factors . . . . .	41
III	METHODOLOGY. . . . .	44
	INTRODUCTION . . . . .	
	Significance. . . . .	
	Population Growth Patterns. . . . .	
	Rural - Urban Population Growth Patterns.	
	RELATED FACTORS. . . . .	
	Regional Location . . . . .	
	Central Place Status. . . . .	
	Size of Place . . . . .	
IV	RESULTS. . . . .	60
	INTRODUCTION . . . . .	60
	RURAL - URBAN POPULATION GROWTH PATTERNS . .	61
	RELATED FACTORS. . . . .	83





<u>Chapter</u>		<u>Page</u>
	Regional Location. . . . .	119
	Central Place Status . . . . .	125
	Size of Place. . . . .	128
V	GENERAL FINDINGS AND IMPLICATIONS . . . . .	144
	GENERAL FINDINGS. . . . .	144
	REFERENCES. . . . .	153



# LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
1	Number of Places, Population, Percent Change, Percent of Total Growth, Rural and Urban, According to Traditional Census Cut-Off Point of 1000 in Alberta, 1956-1979. . . . .	63
2	Number of Places, Population, Percent Change, Percent of Total Growth, Rural-Urban According to Traditional Census Cut-Off Point of 1000 in 1956, Alberta, 1956-1961. . .	64
3	Number of Places, Population Percent Change, Percent of Total Growth, Rural-Urban According to Traditional Census Cut-Off Point of 1000 in 1961, Alberta, 1961-1966. . .	66
4	Number of Places, Population, Percent Change, Percent of Total Growth, Rural-Urban According to Traditional Census Cut-Off Point of 1000 in 1966, Alberta, 1966-1971. . .	67
5	Number of Places, Population, Percent Change, Percent of Total Growth, Rural-Urban Accord- ing to Traditional Census Cut-Off Point of 1000 in 1971, Alberta, 1971-1976 . . . . .	69
6	Number of Places, Population, Percent Change, Percent of Total Growth, Rural-Urban Accord- ing to Traditional Census Cut-Off Point of 1000 in 1976, Alberta, 1976-1979 . . . . .	70
7	Number of Places, Population, Rural-Urban According to Traditional Census Cut-Off Point of 1000 in 1956, Alberta, 1956-1979. . . . .	74
8	Number of Places, Percent Change, Rural-Urban According to Traditional Census Cut-Off Point of 1000 in 1956, Alberta by Five Year Periods from 1956 to 1979. . . . .	76
9	Number of Places, Percent of Total Growth, Rural and Urban According to Traditional Census Cut-Off Point of 1000 in 1956, Alberta by Five Year Periods from 1956- 1979 . . . . .	77





<u>TABLE</u>		<u>PAGE</u>
10	Population, Percent Change, Percent of Total Growth, Metropolitan and Non-metropolitan, Alberta 1956-1979 . . . . .	79
11	Population, Metropolitan-Non-metropolitan Alberta, 1956-1979. . . . .	81
12	Percent Change in Population, Metropolitan-Non-metropolitan Alberta by Five Year Periods, 1956-1979 . . . . .	82
13	Percent of Total Growth in Population, Metropolitan-Non-metropolitan, Alberta by Five Year Periods, 1956-1979 . . . . .	82
14	Number of Places, Population, Percent Change, Percent of Total Growth by Distance Category From the Nearest Dominant Urban Places, Alberta, 1956-1979. . . . .	84
15	Number of Places, Population by Distance Category from the Nearest Dominant Urban Place Alberta, 1956-1979. . . . .	86
16	Number of Places, Percent Change by Distance Category from the Nearest Dominant Urban Place, Alberta by Five Year Periods from 1956-1979 . .	87
17	Number of Places, Percent of Total Growth by Distance Category from the Nearest Dominant Urban Places, Alberta by Five Year Periods from 1956 to 1979 . . . . .	88
18	Number of Places, Population, Percent Change, Percent of Total Growth by Distance Category from Medicine Hat, 1956-1979. . . . .	90
19	Number of Places, Population, Percent Change, Percent of Total Growth, by Distance Category from Lethbridge, 1956-1979. . . . .	91
20	Number of Places, Population, Percent Change, Percent of Total Growth, by Distance Category from Red Deer, 1956-1979. . . . .	93



TABLEPAGE

21	Number of Places, Population, Percent Change, Percent of Total Growth, by Distance Category from Grande Prairie, 1956-1979. . . . .	94
22	Number of Places, Population, Percent Change, Percent of Total Growth by Distance Category from Calgary, 1956-1979 . . . . .	95
23	Number of Places, Population, Percent Change, Percent of Total Growth by Distance Category from Edmonton, 1956-1979. . . . .	97
24	Number of Places, Population, by Distance Category from Medicine Hat, 1956-1979 . . . . .	98
25	Number of Places, Percent Change by Distance Category from Medicine Hat by Five Year Periods from 1956-1979. . . . .	99
26	Number of Places, Percent of Total Growth by Distance Category from Medicine Hat, by Five Year Periods from 1956-1979 . . . . .	101
27	Number of Places, Population by Distance Category from Lethbridge, 1956-1979 . . . . .	102
28	Number of Places, Percent Change by Distance Category from Lethbridge by Five Year Periods from 1956-1979. . . . .	103
29	Number of Places, Percent of Total Growth by Distance Category from Lethbridge by Five Year Periods from 1956-1979 . . . . .	104
30	Number of Places, Population by Distance Category from Red Deer, 1956-1979 . . . . .	105
31	Number of Places, Percent Change by Distance Category from Red Deer by Five Year Periods from 1956-1979. . . . .	106
32	Number of Places, Percent of Total Growth by Distance Category from Red Deer by Five Year Periods from 1956-1979. . . . .	108
33	Number of Places, Population by Distance Category from Grande Prairie, 1956-1979 . . . . .	109



<u>TABLE</u>	<u>PAGE</u>
34     Number of Places, Percent Change by Distance Category from Grande Prairie by Five Year Periods from 1956-1979 . . . . .	110
35     Number of Places, Percent of Total Growth by Distance Category from Grande Prairie by Five Year Periods from 1956-1979 . . . . .	111
36     Number of Places, Population by Distance Category from Calgary, 1956-1979 . . . . .	112
37     Number of Places, Percent Change by Distance Category from Calgary by Five Year Periods from 1956-1979 . . . . .	113
38     Number of Places, Percent of Total Growth by Distance Category from Calgary by Five Year Periods from 1956-1979. . . . .	115
39     Number of Places, Population by Distance Category from Edmonton, 1956-1979. . . . .	116
40     Number of Places, Percent Change by Distance Category from Edmonton by Five Year Periods from 1956-1979 . . . . .	117
41     Number of Places, Percent of Total Growth by Distance Category from Edmonton by Five Year Periods from 1956-1979 . . . . .	118
42     Number of Places, Population, Percent Change and Percent of Total Growth by Regional Location, Alberta, 1956-1979 . . . . .	120
43     Number of Places, Population by Regional Location, Alberta by Five Year Periods from 1956-1979. . . . .	122
44     Number of Places and Percent Change by Regional Location Alberta by Five Year Periods from 1956-1979 . . . . .	123
45     Number of Places and Percent of Total Growth by Regional Location, Alberta by Five Year Periods from 1956-1979 . . . . .	124



TABLEPAGE

46	Number of Places, Population, Percent Change, and Percent of Total Growth for Central and Non-central Places, Alberta, 1956-1979 . . . . .	126
47	Number of Places, Population for Central and Non-central Places, Alberta 1956-1979. . . . .	127
48	Number of Places, Percent Change in Central and Non-central Places, by Five Year Periods, 1956-1979 . . . . .	129
49	Number of Places and Percent of Total Growth in Central and Non-central Places, Alberta by Five Year Periods, 1956-1979. . . . .	130
50	Number of Places, Population, Percent Change and Percent of Total Growth by Size, Alberta 1956-1979. . . . .	131
51	Number of Places, Population, Percent Change, Percent of Total Growth by Size of Place in 1956, Alberta, 1956-1961 . . . . .	133
52	Number of Places, Population, Percent Change, Percent of Total Growth by Size of Place in 1961, Alberta, 1961-1966. . . . .	134
53	Number of Places, Population, Percent Change, Percent to Total Growth by Size of Place in 1966, Alberta, 1966-1971 . . . . .	136
54	Number of Places, Population, Percent Change, Percent of Total Growth by Size of Place in 1971, Alberta, 1971-1976 . . . . .	137
55	Number of Places, Population, Percent Change, Percent of Total Growth by Size of Place in 1976, Alberta, 1976-1979 . . . . .	138
56	Number of Places Population by Size of Place in 1956, Alberta 1956-1979 . . . . .	140
57	Number of Places, Percent Change by Size of Place in 1956, Alberta, in Five Year Periods 1956-1979. . . . .	141
58	Number of Places, Percent of Total Growth by Size of Place in 1956 Alberta in Five Year Periods 1956-1979. . . . .	142





## CHAPTER I

### OVERVIEW

#### INTRODUCTION

Human populations, historically, have been on the move. This movement of mankind has implications for both the place of origin and the place of destination. Man's movements, combined with natural increases, can lead to a growth of human population in some areas and a decline in others. A significant movement in modern history has been the vast rural to urban migration. This rural to urban migration trend, as evidenced in North America, is both well known and well documented (Beale, 1975; Canadian Council on Rural Development, 1969; Nelson, 1955; Schwarzweller, 1975; Tremblay, 1966; Warrack, 1970). The rural to urban trend has been cited as a significant and worrisome decline in rural places, as well as a dangerous and disruptive growth of urban places (Canadian Council on Rural Development, 1969; Tremblay, 1966; Warrack, 1970). Much of the concern with rural depopulation has come about as a result of the accompanying decline in economic activity. The existence of many places is threatened as the quantity and quality of



services demanded increases and the population to sustain such services declines. In urban places, attention has focused on the increasing, "problems of pollution, crime, congestion, social alienation, and other real or suspected effects of large-scale massings of people" (Beale, 1975, p. 3).

In 1966, Donald Whyte predicted that the rural to urban trend would continue for a number of decades.

There is little likelihood that this trend will be altered and it is inevitable that by the end of the present century, the rural farm population will constitute a very small proportion of Canada's citizenry, that rural enterprises, although continuing to occupy a prominent position in the national economy, will be relatively less strategic in effecting the social welfare of the Canadian people, and that the urban-based enterprises will continue to employ more people and through them, extend a more pervasive influence over the institutional and cultural development of the nation. (p. 10).

Others suggest that rural areas have already been so dramatically depleted of population that no further significant decline is possible. Calvin L. Beale, in 1969, wrote:

With respect to the future, one point that can be made with certainty is that in the United States as a whole the bulk of the demographic adjustment stemming from agricultural changes has now taken place, for the farm population has already declined by more than one-half. (p. 271).



More recent studies (Beale, 1975; Parenteau, 1980; Schwarzweller, 1979) go one step further. They suggest that the rural to urban migration trend has been reversed. Calvin L. Beale (1975) found, that from 1970 to 1973, nonmetropolitan areas of the United States grew at a faster rate than metropolitan areas. Robert Parenteau (1980), a Statistics Canada researcher, also noted a "back to the land" movement in Canada. Parenteau revealed, in his monograph, that while Canada's urban population grew by 5.9 percent, between the years 1971 and 1976, Canada's rural population increased by 8.8 percent. Parenteau saw the significance of this as a landmark, possibly signalling the end of increasing urbanization in Canada. This "back to the land" movement was not found in Alberta, Saskatchewan, or the Northwest Territories, suggesting that rural-urban growth patterns may vary from region to region within Canada.

If as Beale and Parenteau suggest, however, there has been a reversal in the rural to urban trend, then an entirely new paradigm on the future course of population distribution may be needed. Schwarzweller (1979) states that:

By directing our research energies toward an understanding and specification of the consequences of turnaround migration we shall assure that appropriate foci of attention will be addressed; in the process we will help to build a more useful sociology of migration and a more comprehensive sociology of development. (p. 20).



However, before a new paradigm is established and a understanding and specification of its consequences attempted, the current data must be examined. This must be done in order to determine if the turnaround is real and to determine the factors associated with the turnaround, provided that it is real.

### OBJECTIVES

The purpose of this thesis is to examine the population growth patterns within Alberta between 1956 and 1979, and to determine if there has been a reversal in the rural to urban migration trend. Rapid economic growth, rising personal incomes, and an increasing population, portend fundamental changes for settlement patterns in Alberta. Boomtowns abound. Urban centers burst at the seams. Yet, in the midst of this upgrowth, stagnation, and even deterioration, continue in some places. In spite of the importance of these changes, there is a paucity of research with respects to population growth patterns in Alberta. Therefore, the aim of this thesis is to provide more information in this area. In order to understand Alberta, it is essential that planners and policy makers are provided with relevant and up-to-date information on important questions regarding population growth patterns. Many of the questions come from related literature but need to be answered using the latest Alberta data available. As





Gerald Hodge (1966) states:

An examination of the literature reveals certain insights which can be formulated into hypothesis and tested, thus yielding a sound basis for an analytical design of trade center changes. (p. 183).

By examining the population growth patterns within Alberta, between 1956 and 1979, a number of relevant questions can be addressed. Relevant questions which will be addressed include:

- (1) Are human populations in rural places increasing?
- (2) If human populations in rural places are increasing, are they growing faster or slower than populations in urban areas?
- (3) What are the major factors associated with the differential growth patterns of places in Alberta?



## CHAPTER II

### LITERATURE REVIEW

#### INTRODUCTION

Patterns of human settlement vary significantly according to complex and interrelated historical, cultural, political, economic, geographic and demographic factors. (Hansen, 1978, p. 1).

Conversely, human settlement patterns influence the historical, cultural, political, and economic development of a society. Exemplification of this concept is put forth by F.J. Turner in his discussion of the significance of the frontier in American history. In view of the above, understanding population growth patterns is the basis of the systematic study of settlement patterns and their relation to human well being.

No where has more effort been put into the specification and understanding of the complex interrelationships between human settlement patterns and the historical, cultural, political, and economic development of society than in North America. While the earliest settlements by Europeans in North America were based on the exploitation of the land's natural resources and trade with Europe, the real opening up of the country came as the result of the



expansion of agrarian pursuits. Agrarian pursuits dominated the patterns of North American settlements up to and even beyond the closing of the frontiers. With this closing, however, came the beginning of the urbanization process.

The social evolution of Canadian society since the closing of its frontiers has witnessed a process of urbanization. Urbanization means more than the establishment and growth of cities and towns. In its broader sense, urbanization denotes a process whereby both countrymen and townsmen come to share an increasingly similar and mutually interdependent set of life experiences. (Whyte, 1966, p. 3).

Throughout the 20th century, urbanization, industrialization, wars, and a revolution in agricultural technology, have effected the patterns of human settlement in North America.

Wars and urbanization-industrialization are closely linked. America's twentieth century wars have been fought on foreign soil. Hence, their domestic economic impact has been to drastically increase industrial output. This has increased demand for labor in the industrial sector; and, especially during World War II, has meant a sucking up of rural workers from the countryside. ... The rural labor shortage has triggered mechanization of agriculture. (Flora and Rodefild, 1978, p. 1).

Furthermore, the search for labor saving techniques has lead to a technological revolution in agriculture. The most dramatic consequence of this revolution was a steep and prolonged decline in numbers of farm people. In 1964, Calvin L. Beale stated:



The fact that the number of farm people in the United States is steadily decreasing is no longer news. It was news fifteen-even ten-years ago, but the decline has become so prolonged, so deep and so common that it has been widely noted and accepted as a fact of life. (p. 264).

The decline in numbers of farm people has been accompanied by a large increase in average farm size, greater productivity, larger sales, larger farm incomes, and higher prices for farm land. Many of these consequences of the technological revolution in agriculture became evident before World War I and continue to influence agriculture today.

The basic features of structural change in Canadian agriculture, as in most rich industrial nations, are reasonably familiar. Since World War II, Canadian agriculture has been characterized by increasing total output, rising total factor productivity (though increasing much more slowly recently), a high rate of growth of labour productivity (exceeding that in non agriculture) substantial increases in real capital value per farm, and increasing farm size. (Veeman and Veeman, 1978, pp. 1-2).

Several negative results of the technological revolution in agriculture have been noted by Flora and Rodefeld (1978).

These include:

massive population shifts to congested cities, increased unemployment, declining rural communities, extreme inequalities within agriculture, a more precarious agriculture dependent on increasingly scarce inputs, and food that is not as nutritious or safe as it should be. (p. 8)





As Flora and Rodefeld point out one of the negative aspects of the technological revolution in agriculture is urbanization. So pervasive was the urbanization process that from the very first census taken in the U.S. in 1790, "the emerging cities grew more rapidly than the rural population in every succeeding decade except one" (Beale, 1978, p. 37). By 1920, more Americans lived in urban places than in rural. Ten years later Canada had also become a predominately urban nation. Alberta, albeit to a lesser extent, also underwent the same urbanization process. The severity of outmigration by rural farm and non-farm people resulted in a loss of function and autonomy in many rural communities. Allan A. Warrack, in his article, "Rural Economic Reorganization as Induced by Agricultural Adjustments" stated that, unless corrective measures are taken, "the present direction of rural Canada seems clear - toward insignificance" (1970, p. 31). Rural depopulation is often linked with excessive social cost due to low settlement densities. Urbanization, on the other hand, is frequently associated with pollution, crime, congestion, alienation and poverty. The result is that rural to urban migration is often cited as the cause of human and social problems.

Prior to 1970, the dominate force effecting the interrelationship between human settlement patterns and human well being, in North America, was the vast rural to urban migration trend. Inspite of the pervasiveness of rural



to urban migration, at no time has it been a perfect one way flow of people. There have always been movements in both directions. However, at no point prior to 1970, was the general direction of this trend questioned. The harbingers of change became evident in the 1960's. It was realized at that time that farm population had already declined by more than one-half (Beale, 1964). As well, a reversal in population growth occurred in some rural places which had previously shown continuous decline (Beale, 1975).

#### THE REVERSAL

In the early 1970's, it became evident that important changes in the dominant rural to urban migration trend were taking place. In 1975, Calvin L. Beale reported that:

the vast rural to urban migration of people that was the common pattern of U.S. population movement in the decades after World War II has been halted and, on balance, even reversed. (Beale, 1975, p. 3).

Beale, using population estimates prepared by the U.S. Bureau of Census, found that between 1970 and 1973 non-metropolitan areas increased 4.2 percent in population while metropolitan areas only increased 2.9 percent. His findings mark two important changes occurring in the study of population growth patterns. The first change has come about as a



result of a growing awareness that the long standing rural to urban migration pattern has passed its zenith and is now moving in a new direction. The changing migration pattern has brought new vitality into the study of settlement patterns and their relation to human well being. The second change is the increasing use of the metropolitan-nonmetropolitan concept as an alternative to the traditional census definition of rural and urban. The metropolitan-nonmetropolitan concept acknowledges:

the linkages and ready access that nearby areas have with the economy and facilities of a metro city. It also implicitly asserts the quasi-rural character that nonmetropolitan-sized cities have and groups them with the rural areas that lie beyond effective commuting range of the metro centers. (Beale, 1972, p. 665).

The increasing use of the metropolitan-nonmetropolitan concept is a response to the realization that rural and urban differences are continually diminishing. While it is true that rural and urban differences are diminishing, significant social and ecological differences remain (Ford, 1978, p. 4). The specification of these differences is problematic because the concept of rural is anything but precise.

Given the great variety of population settlement and density patterns which prevails in this country, to say nothing of attitudes and life styles, it is often rather arbitrary to classify one place or group of people as "rural" and another as "urban". (Hansen, 1973, p. 1).



Nevertheless, quantitative analysis of population growth patterns must rely on some conventional distinctions. The most commonly used quantitative distinctions are those of the official census. In Canada, this means that persons, living in open country areas or in places with fewer than 1,000 inhabitants, are classified as rural. Persons, living in places of 1,000 or more inhabitants, are considered to be urban. In the United States, the traditional cut off point between rural and urban places is 2,500 inhabitants. As well, the metropolitan-nonmetropolitan concept, which is gaining use as an indicator of rural-urban differences, utilizes standard census categories. The customary practise in the United States involves the differentiation of:

metropolitan, and nonmetropolitan residence categories in terms of Standard Metropolitan Statistical Areas. There are a number of criteria for defining and SMSA but essentially it must have one city of at least 50,000 inhabitants, and it includes the county of such a central city and those adjacent counties which are found to be metropolitan in character and economically and socially integrated with the county of the central city. (Hansen, 1973, p. 1).

The Canadian census specifies similar areas, but uses a cut off of 100,000 or more inhabitants, and defines such places as Census Metropolitan Areas. Metropolitan and nonmetropolitan residence categories can, therefore, be differentiated on the basis of Census Metropolitan Areas.





Calvin L. Beale's (1975), "The Revival of Population Growth in Nonmetropolitan America", exemplifies the use of the metropolitan-nonmetropolitan concept. The use of the traditional census definition of rural and urban is found in Robert Parenteau's (1980) monograph, "Is Canada Going Back to the Land?". Parenteau's monograph purports that a large number of Canadians, who according to previous indicators would have been expected to be living in urban areas, are in fact living in the country. According to Parenteau, this was the first time in Canadian history that a move out of the cities was reflected in the census. Parenteau states that "Canada may well have reached a plateau in the urbanization trend which has continued unabated for a century" (p. 11). While Parenteau realizes that the move to ruralization has to be verified with additional data, he contends that:

a continuation of the current trend could significantly alter the foundations of Canadian society. It may be necessary to revise our preconceived notion of the city (often synonymous with urban) as the ideal place in which to live.

The future shape and distribution of the population, as illustrated by the types of data used herein, will reflect changing values and may force careful review of land use and environmental policies, as ruralization of the population puts new pressures on limited and precious agricultural lands. (p. 29).

While Parenteau's analysis reveals that the urban section of



Alberta defied the Canadian trend by continuing to grow faster than the rural between 1971 and 1976, indications of change are present.

Anna Parkinson, in her thesis, "Growth of Small Urban Centers in Alberta 1971-1976", reported that:

for Alberta, the trend projected by Lithwick and others towards increased urbanization, insofar as that means increased concentration in the largest cities and the gradual loss of population in smaller urban centers, does not seem to be happening. (1978, p. 13).

Parkinson felt that it was significant that the proportion of population living in Edmonton and Calgary had not increased as previous trends had indicated they would. She also found modest percentage increases in smaller cities and towns. The rural areas, however, continued to show a decline in population inspite of dramatic growth in some rural areas near the two major cities. Parkinson suggests that:

the increased proportion of the population in the towns and small cities may be due to any one, or a combination of the following:

- a) Preference for small town living,
- b) Improved economic opportunities in small town,
- c) The location of the small town within commuting distance of the large city,
- d) Budgetary considerations...
- e) A temporary phenomenon due to temporary or local considerations which may be reversed in the next census period.

(pp. 14-15).

Parkinson's thesis makes an important contribution to the study of population growth patterns in Alberta, because it



gives an indication that the metropolitan-nonmetropolitan concept would prove to be a useful framework of analysis. Other researchers have utilized the metropolitan-nonmetropolitan concept in developing their analytical framework.

As Fuguitt and Zuiches' (1975) analysis, of U.S. Bureau of Census population survey results, between 1970 and 1973, display, the rate of net migration for metropolitan areas outside of central cities was three times the rate for the nonmetropolitan United States. Fuguitt and Zuiches were perplexed with why there had been no significant growth of medium sized cities, small towns, and rural areas, in nonmetropolitan counties, when for years public opinion research had indicated a strong preference for these areas. Fuguitt and Zuiches concluded that "antiurbanism in America appears to be qualified: although many people do not prefer to live in big cities, few want to live far from one" (p. 501). Fuguitt and Zuiches suggest that previous residential preference studies had failed to detect the qualified nature of antiurbanism because they had not allowed respondents to express preference for the degree of proximity to a large city. When this opportunity was made available, the respondents strongly favored the peripheral metropolitan ring which in fact had been growing rapidly. Thus, Fuguitt and Zuiches went on to conclude that:



the proportion of people eager to move to a remote nonmetropolitan setting appears to be small and balanced by an equal number already in nonmetropolitan areas who want to move closer to a big city. (p. 502).

The points made by Fuguitt and Zuiches are useful in analyzing population growth patterns within Alberta and have been expanded by others.

For example, Gordon F. De Jong (1977), who was also interested in the effects of residential preferences on migration, recognized that public opinion polls showed a decided preference by Americans to live in comparatively small cities, towns, and rural areas rather than in large cities. As well, he knew from the work of Fuguitt and Zuiches that the majority of people wanted to live in places which were comparatively close to a major urban center. Based on these two previous findings, De Jong set out to test the hypothesis that size of place and urban proximity preferences were factors in the dispersal of population through migration. De Jong obtained his data from a longitudinal study of Pennsylvania households. In analyzing the data, he found that only one-tenth of the households that moved, actually attained their preference for either a smaller center or a more distant location.

Preferences for smaller-sized places and proximity to a city were not correlated with where people actually moved when the size and proximity of the previous residence were taken into consideration. (p. 169).





De Jong's conclusion does not reduce the significance of findings suggesting a preference for small town and rural living, but does suggest that the relationship between residential preference and actual destination may be more complex than originally thought.

Further evidence of this complex relationship between residential preferences and actual settlement patterns, was revealed in a study of Edmonton's urban fringe, carried out by Murri and Haigh (1980). They found that, while Edmonton grew by 187.5 percent between 1951 and 1979, the surrounding communities within a 25 mile radius grew by 1,163 percent. While the statistics reveal a strong anti-urbanism trend, a survey of the people who moved, disclosed that not only had a large number moved to escape the city but a significant number had been forced out of the city by high housing costs. The result of their survey also showed that the residents of the fringe communities did not see themselves as rural but identified with the city and lead an urban life style.

An inescapable conclusion appears to be that most of the fringe communities, a large proportion of which previously existed as rural service and trade centers are now functioning as a regional community system. (p. 25).

All of the previous studies indicate that subtle, but as yet undefined, changes are occurring in the human



settlement patterns of North America. As these new settlement patterns emerge there is a growing awareness of the need for a new concept to supplement the traditional census division of society into rural and urban segments. The most commonly used concept for this purpose appears to be the metropolitan-nonmetropolitan notion. The metropolitan-nonmetropolitan concept allows the qualified nature of the ruralization process to be taken into consideration. The urbanization process that dominated human settlement patterns in North American until the late 1960's saw a vast movement of rural, predominately farm people, to large and growing cities. The new ruralization process evidenced by Beale (1975) and others is not a movement back to the farms but instead is a movement of urban people to less urbanized places. If this is the case, then we are not experiencing an urban to rural migration but rather the next logical step in the development of an essentially urban, and still urbanizing society.

C. Jack Tucker, in a paper entitled, "Changing Patterns of Migration Between Metropolitan and Nonmetropolitan Areas in the United States: Recent Evidence" stated that:

revival of population growth in nonmetropolitan areas does not take place at the expense of the metropolitan complex, for continued, rapid, nonmetropolitan growth in an area generally means that the area itself may eventually become metropolitan, either as a separate SMSA or, more likely, as an addition to another SMSA. (1976, p. 442).



The study on which Tucker's paper was based was essentially an updating Beale's 1975 information on the changing patterns of migration between metropolitan and nonmetropolitan areas in the United States. Using data from a 1975 population survey, Tucker confirmed that a reversal had taken place in the traditional net migration stream between metropolitan and nonmetropolitan areas in the United States. Between 1965 and 1970, there was a net outmigration of 350,000 people from the nonmetropolitan areas. From 1970 to 1975, however, there was a net immigration to nonmetropolitan areas of 1,600,000 persons. Tucker attributes the reversal to a 23 percent increase in the number of metropolitan residents moving to nonmetropolitan areas and a 12 percent decrease in the number of nonmetropolitan residents moving to metropolitan areas over the 1965-1970 levels. Changes in the age structure and population bases of metropolitan and nonmetropolitan areas accounted for only a small part of the changes in the size of migration streams. The major factor in changing the size of the migration streams was attributed to "real shifts in outmigration propensities at practically all ages in both areas" (Tucker, 1976, p. 435). Tucker points out that while there has been a reversal in the net migration flow, the metropolitan areas have increased to such an extent that three-quarters of all Americans now live in metropolitan areas. Because metropolitan areas have expanded over such a



large area it is no longer necessary to live in a large city to enjoy the amenities of urban life. As well, this allows rural residents to enjoy the benefits of the city without having to suffer the unpleasantness commonly associated with life in the city center. By the same token city dwellers may escape the city center without losing the advantages of urban life. Tucker's paper adds support to the contention that human settlement patterns are being significantly altered, but at the same time it adds fuel to the growing controversy over the specification and understanding of these changes.

Lamont and Proudfoot's study, "Migration and Changing Settlement Patterns in Alberta" looked at a selected sample of small Alberta places. They found that certain broad patterns were identifiable in the urbanization process.

Migrants to small centers in Alberta are for the most part younger, better educated, and engaged in more highly skilled occupations than the populace as a whole. (1974, p. 234).

They also found that a large number of migrants were 65 years or older and consisted mainly of retired farmers. Of the migrants sampled, the young tended to move farther from their point of origin than the old. The faster growing, more economically viable, communities attracted younger migrants, whereas the older retiring migrants were attracted to less





viable places. The data collected by Lamont and Proudfoot, indicated that these trends would likely continue for some time.

Indeed, migration into the larger centers may well increase, both in terms of volume and rate at which movement takes place, as the levels of education and skills of the total population rise. (p. 235).

These findings are important not only because they contribute to an understanding of the changing settlement patterns in Alberta, but also because they point to the fact that changes may have important consequences for human well being.

Louis A. Ploch (1978) from the University of Maine, in Orono, studied the reversal in the migration trend in order to identify some rural development consequences. Like Lamont and Proudfoot, Ploch found that the majority of migrants were relatively young and highly educated. As well, many were involved in professional and managerial occupations. An effect of the reversal, cited by Ploch, was that there was a sizeable increase of population in areas which had previously been losing population. Ploch suggested that many of the migrants were seeking improved quality-of-life. This desire for an improved life style, as well as the high level of training and skills of young rural migrants was viewed as making them a valuable developmental resource. Ploch also suggested that rural development and policy consequences



of the reversal were likely to be many and far reaching. He went on to describe how defining the rural development consequences would be a difficult and complicated task, particularly with respects to variations evident in composition, direction, and magnitude of new migration patterns. Ploch's study puts light on the importance of understanding the consequences of changing settlement patterns. At the same time, he points out the significance of the basic background research which must be initially carried out. Before the consequences can be adequately evaluated, the composition, direction, and magnitude, of the new migration patterns should be analyzed and explained.

Harry K. Schwarzweller, in his paper, "Migration and the Changing Rural Scene" proports:

in a dramatic reversal of the long established trend towards urban concentration, America's nonmetropolitan areas are now growing at a rate exceeding that of its metropolitan areas. What this population turnaround protends for the future of rural life, the character and stability of rural communities, and the viability of American agriculture, is still uncertain. (1979, p. 7).

Schwarzweller displays a keen interest in the consequences of the turnaround and the changes that could effect the structural organization of America. Although skeptical, Schwarzweller admits that the turnaround may be a manifestation of a new post industrial ecological unit similar to the "urban field" described by Friedman and Miller in 1965. In



any case, he supports the use of the metropolitan-nonmetropolitan framework of analysis and suggests that the rural-urban dichotomy is losing usefulness as an analytical concept. "In any event, it is important we begin to formulate some kind of reasoned imagery of where the changing rural scene will lead" (Schwarzweiler, 1979, p. 19). Schwarzweiler suggests that in order to provide more useful information on the changing rural scene a solid base of relevant information must be compiled. The relationship between both immigration and outmigration streams, as well as the changing rural scene must be identified and understood. This is not a simple task. As Schwarzweiler points out the consequences of migration and redistribution involve:

not only population growth or decline and demographic disturbances per se, but they also have social, economic, and political dimensions that often seem to defy our most sophisticated regression equations - and seem to fall through the slats of our most elaborate theoretical models. (p. 20).

Schwarzweiler's paper emphasizes the challenges facing rural sociologists in their quest to gain an understanding of the reversal in rural to urban migration and their quest to understand the sociocultural impacts of migration. Time will be needed for a complete specification of the reversal phenomenon and an understanding of its consequences.

Kenneth M. Johnson and Ross L. Purdy (1980) studied recent nonmetropolitan population change within a fifty-year



perspective. Their evaluation of nonmetropolitan population change since 1970 was made by looking back at changes since 1920 within ten year cohorts. They found that the post 1970 gains in nonmetropolitan population were extensive, "occurring even in the majority of counties that lost population consistently from 1920 to 1970", (p. 57). They found that nonmetropolitan counties which were adjacent to metropolitan counties grew faster than non-adjacent counties.

In a clear break with traditional patterns, net immigration contributed significantly to overall population gain and was particularly strong among counties without an urban center. (p. 57).

Their study makes two important points. First, they cite substantial migration from metropolitan to nonmetropolitan areas in the United States. Finally, they indicate that this emerging migration pattern is more than the result of a spill over from urban areas.

The studies reviewed have been concerned with the changing settlement patterns occurring in North America. The most significant of these changes has been the reversal in the traditional metropolitan-nonmetropolitan migration trend. Evidence of general changes and the resulting consequences makes it unmistakably clear that more research is needed. Many of the studies point to the direction in which research should be heading. There can be no question





that the cornerstone of such research in Alberta must be a specification of the present population growth patterns and an understanding of the factors related to these patterns.

### RELATED FACTORS

A number of studies have been conducted to examine factors related to population growth. The basic objective in these studies is to determine the degree of relationship between population growth patterns and variables suspected of being associated with growth and decline of communities. Much of this research resulted from the cry, "the small town is dying". This cry was often heard during the vast rural to urban migration which dominated population movement in North America through most of the twentieth century. Calvin L. Beale states that "there are indeed dying rural towns and even a parcel of dead ones" (1978, p. 43). But this should in no way be taken to mean that all small towns are dying. There is justification for the concern over the decline of small towns (Beale, 1968; Canadian Council on Rural Development, 1969; Warrack, 1970). It is, therefore, understandable that researchers have attempted to determine the factors related to the growth of some places and the decline of others. Because of the large number of factors suspected of being related to population growth it is impossible for any one study to deal with them all. For this reason, researchers generally select the variables which they suspect to be the



most closely related to population growth patterns. Four variables frequently cited in the literature as being related to population growth are:

- (1) distance to the nearest dominate urban place,
- (2) regional location,
- (3) central place status,
- (4) size of place.

#### Distance to the Nearest Dominant Urban Place

One factor frequently cited as being related to population growth is distance to the nearest dominant urban place. This assumes that places do not exist in isolation but rather function as part of a regional community system. Therefore, distance to the nearest dominant urban place has been useful in explaining population growth of smaller places.

Quite a number of studies, including Bracy (1958), Doerflinger (1962), Fuguitt (1963, 1966), Glynn, Labowitz and Stouse (1961), Hart and Salisbury (1965), Northam (1963), and Tarver and Beale (1967), have shown that towns near large cities are more likely to grow than others. ...

Other studies, involving small towns as well as small and middlesized cities, have detected a U-shaped relationship between growth and location, with centers near to and remote from larger places growing more than those in between (Bogue, 1950: 5-7; Borchert, 1963; Fuguitt, 1965; Hardin, 1960; Hawley, 1965: 29-30; Madden, 1956). (Butler and Fuguitt, 1970, p. 397).



The general reason put forth for the growth of communities close to dominant urban places is that they are sharing in the urban growth by providing residential and industrial services to the city. The growth of more remote places is frequently attributed to their competitive advantage as central places within the hinterland. Places located inbetween are seen as being too close to the dominate urban place to have a competitive advantage but too far away to share in the residential and industrial growth of the dominate urban place.

Tarver and Beale (1968), in their study, "Population Trends of Southern Nonmetropolitan Towns, 1950 to 1960", examined the relationship of distance to the nearest dominant metropolitan center. Population data was obtained from the 1950 and 1960 census enumerations. No attempt was made to adjust the figures due to annexation or the detachment of territory. This resulted in some population changes being recorded due to factors other than migration and natural increase. The distance for each of the 801 towns studied, with respects to the nearest dominant metropolitan center, was read from a Rand McNally Road Atlas. The towns were classified into six distance intervals measured in highway mileages. An analysis of the relationship, between population growth and distance to the nearest metropolitan center, was carried out. The results of these analyses indicated that as distance from the nearest metropolitan center increased,



population growth declined consistently within a 150 mile radius. They found, however, that centers beyond 150 miles had greater proportionate population increases than those places between 50 and 149 miles from metropolitan centers.

Thus, metropolitan proximity was an important factor in accounting for the rapid population growth of towns, particularly for those places within the immediate orbit of large city dominance (within a radius of 25 miles). (p. 27).

Glenn V. Fuguitt, in his 1964 study "Growing and Declining Villages in Wisconsin 1950-1960" looked at "Location near cities" as a factor related to population growth. Fuguitt points out that the general level of urbanization is frequently associated with general population growth. He goes on to suggest that growing areas almost invariably include a large city. He attributes the growth in the surrounding areas of the city to a decentralization process. This decentralization process results in the development of a suburban community in which former rural trade centers become part of a regional community system.

With this population trend an association between growth and the location of villages would be expected, with villages near large cities growing more rapidly than others. (p. 13).

In order to test this proposition, Fuguitt classified 424 Wisconsin villages according to the size of the largest





community in 1950, which as located within a radius of 30 miles. He then analyzed these for relationship to growth. He found that places within 30 miles of larger places were more likely to grow than more distant villages between the years 1940 and 1950. Fuguitt suggests that "most growing villages are becoming suburbs of nearby large centers" (p. 15).

A classic study conducted by Edward Hassinger, in 1957, attempted to determine if "smaller places in proximity to larger ones are at a disadvantage in maintaining population growth" (p. 132). Hassinger considered size of the trade center and distance from a larger center as factors effecting the growth of the community. He found that the distance of a center from a larger community was significant. The size of the larger community was also found to influence the growth of surrounding centers. Communities with over 5,000 inhabitants demonstrated a kind of suburbanization not observed in smaller centers. Even when size of the place was controlled, distance to a larger place remained a factor in population growth.

A subsequent study conducted in 1970 by Butler and Fuguitt replicated and extended, both in time and geographic area, Hassinger's study. Butler and Fuguitt looked at the combined effects of competition and symbiosis on small town population growth. Studying two successive decade, 1940-1950 and 1950-1960, in three separate geographic areas, a farm area, a remote area, and an urban area of Wisconsin, they found that



Hassinger's results were only supported in the farm region and to a lesser extent in the remote region within the 1940 to 1950 period. The association between distance and population in all other areas, for the remaining periods, were negative or nonexistent.

Hassinger's paper "The Relationship of Trade-Center Population Change to Distance from Larger Centers in an Agricultural Area" and Butler and Fuguitt's paper "Small-Town Population Change and Distance from Larger Towns: A Replication of Hassinger's Study" do not deal directly with the effects of distance to the nearest dominant urban place but rather deal with the relationship between smaller and larger places of a nonmetropolitan nature. The results of these studies cannot be expected to be the same as studies dealing with distance to the nearest dominant metropolitan place. They do, however, provide important background information on the relationship between distance and population growth. Fuguitt's paper "Growing and Declining Villages in Wisconsin 1950-1960" and Butler and Fuguitt's paper "Population Trends of Southern Nonmetropolitan Towns, 1950 to 1960" deal directly with the relationship between distance to the nearest dominant urban place and provide an important approach for research in this area.



### Regional Location

Regional location is frequently cited as being an important variable associated with population growth. An underlying postulate is that places do not exist independently but as part of a regional community system. On this basis it is generally assumed that places located in a growing region are more likely to grow or be growing than places located in regions with a stable or declining population.

Tarver and Beale (1968) looking at the population trends of southern towns found regional location to be the second most important factor in explaining the 1950 to 1960 numerical population changes. Utilizing the Economic Regions delineated by Bogue and Beale in 1961, they classified the 801 southern towns into the nine economic regions of the South. Population changes were analyzed to determine if any significant regional differences existed. They found "rather marked differences in the population changes of towns located in the nine different economic regions in the South" (Tarver and Beale, 1968, p. 29). Tarver and Beale's study, "Population Trends of Southern Nonmetropolitan Towns, 1950 to 1960" shows how regional location may be used to explain population changes.

Butler and Fuguitt (1970), studying small-town population change, found that general location within an urban part of the state was "more important to growth than specific setting with regard to adjacent large towns" (p. 403).



Butler and Fuguitt, in replicating Hassinger's 1957 study, found that they could improve their results if they looked not only at a farm region, but a remote region and an urban region as well. They made the decision to study three regions on the basis of previous studies that had shown:

systematic differences between the central place structure of towns located in a remote region and that of towns located in a more urban region. For example, Brunn (1966) compared the urbanized northwestern part of Ohio with the declining rural southwest and found differences in locational patterns, density of the tributary population, number of workers, and types of establishments. (Butler and Fuguitt, 1968, p. 400).

In defining the regions, Butler and Fuguitt used counties as the basic geographical unit. For regional groupings they selected contiguous counties with as much homogeneity within and heterogeneity between groups as possible. As well, selected social and economic variables were examined. The results show regional location was more important to growth than distance to the nearest large town.

Glenn V. Fuguitt, in his 1964 study, "Growing and Declining Villages in Wisconsin, 1950-1960" suggested that "a third factor which could be associated with village growth is the general level of growth of the area in which the village is located (p. 15). Fuguitt compared village growth with the general growth of the county in which the village was situated. The results of this comparison revealed a strong





association between village growth and growth of the area in which the village was located.

All of these studies displayed evidence that regional location is an important factor related to population growth. Both the Bulter and Fuguitt study and the Fuguitt study point to the usefulness of the county as a basic geographic unit. Butler and Fuguitt demonstrate basic differences between, urban, agricultural, and remote areas. Fuguitt contributes to an understanding of the underlying postulate that places do not function independently but rather as part of a regional community system.

### Central Places

Location is one variable considered to be related to population change. "Underlying this factor is the postulate that population centers exist not separately but as an integrated part of the whole area, including both rural and urban elements (Butler and Fuguitt, 1970, p. 396). In the research regarding regional location and location near to dominant urban places, the concept of a regional community system is evident. Much of this concern with regional community systems has come from the work carried out on the theory of central places. Walter Christaller laid the foundation of central place theory in 1933. The six main features of Christaller's theory, summarized by Berry and



Pred, are as follows:

- (1) The main function of a city is to be a central place providing goods and services for the market area; therefore, cities are located central to the maximum profit area they can command.
- (2) The greater a city's centrality, the higher its order.
- (3) Higher order places offer a larger range of goods and services, but are more widely spaced than lower order places.
- (4) Low order places offer goods purchased frequently or convenience goods.
- (5) A hierarchy of central places exists.
- (6) Three hierarchies may be organized according to
  - (a) a market principle,
  - (b) a transportation principle, and
  - (c) an administrative principle.
 (1965, pp. 3-4).

The extension and use of the central place theory has permeated every field concerned with human settlement patterns and their relationship to human well being. The study of the relationship between central places and their surrounding areas, frequently referred to as the hinterland or functional region, has resulted in viewing communities not as isolated places but as parts of interrelated community systems.

An important study, "The Prairie Community System", was carried out by Zimmerman and Moneo, in 1970. They argued that the settlement patterns on the Canadian prairies could be divided into a series of community systems. Each of the community systems developed around a central place, which they referred to as "farm cities" (centers of 3,000 or more in 1966 with approximately 100 businesses). As well, each system



contained three or four "home-towns" (centers of 500 with approximately 20 business), eight or nine "stop-off centers" (centers of 300 with approximately 5 businesses), and people of the open country within a 25 to 30 mile radius of the "farm city". They identified fifty farm cities in Alberta as being the nuclei around which development would take place between 1970 and 2000. Five of these places were singled out as being higher order central places. These places, referred to as Prairie Cities (cities of 20,000 or more), were seen as being dominant within the prairie community system.

Several studies (Fast, 1972; Meredith, 1972) have examined the prairie community system and found Zimmerman and Moneo's description to be an accurate reflection. Unfortunately, the relationship between location and population growth was not examined in these studies. Perhaps, this relationship has not been studied because of the underlying assumption that central places are growth centers.

A number of studies have looked at the relationship between central place functions, such as county seat status, location of state or federal institution. Tarver and Beale (1968) examined county seat status as a factor related to population growth. In their study, all places were classified as county seats or noncounty seats. The population growth patterns of county seats and noncounty seats were compared to see if county seat status was an important factor affecting



population growth. The results of their analysis "clearly indicate that county seat status is an important factor affecting the population changes of small nonmetropolitan southern towns under 5000 in 1950, but not for larger towns" (p. 27). When size of place was controlled county seat status became less significant. Their study provides useful insight as to how the study of central places might be approached. Glenn V. Fuguitt, in his 1965 study, "County Seat Status as a Factor in Small Town Growth and Decline", examined all nonmetropolitan places in the United States outside of New England. He tested the hypothesis, "are county seats more likely to grow than other small towns" (p. 245). Fuguitt found that "with size of place controlled, county seats were more likely to grow than other towns in the South, and in the North away from metropolitan centers" (p. 245). The study was limited to centers of less than 10,000 but provides insight into the central place function of county seats. Fuguitt suggests that the variation found between regions was largely due to different levels of importance of the county as a unit of local government. In the South, where the county is considered more important, the relationship to growth is strongest. This could mean that the higher a place is on the hierarchy of central places the faster growth may occur.





### Size of Place

One factor consistently found to be associated with population growth and decline is size of place. It stands to reason that larger places will demonstrate larger numerical population change, but studies have shown that larger places have higher proportional population changes as well. It has also been demonstrated that larger places are less likely to lose population than smaller places.

S.C. Ratcliffe tested the hypothesis that "the smaller the place the greater is its liability to lose inhabitants, and the larger the place the less this liability, (1942, p. 318). Ratcliffe studied all of the incorporated hamlets and villages in the United States during the decade from 1930 to 1940. In his study, hamlets were defined as incorporated places of less than 250 persons and villages were defined as incorporated places between 250 and 2,499. He used all of the incorporated hamlets and villages that reported population in both 1930 and 1940. The places were divided into four size classifications, villages with populations of 1,000-2,499; 500-999; 250-499; and hamlets with populations of less than 250. Identical places were used in 1930 and 1940 even though some of the places had grown larger than 2,500 by 1940, thereby placing them in an urban category. Ratcliffe's results showed that as the size of place decreased the percent of places losing population increased. Ratcliffe's



paper provides a basic approach to the study of the relationship between size of place and population growth.

James D. Tarver and Calvin L. Beale (1968) investigated the effects of four variables; regional location, county seat status; distance to nearest dominant metropolitan center and size of place in 1950, on population trends in southern nonmetropolitan towns between 1950 and 1960. Population changes indicated by census data were related to each of the variables. One conclusion of their analysis was that the greatest amount of population change between 1950 and 1960 was explained by the size of place in 1950 with a positive relationship demonstrated between size of place in 1950 and 1950-1960 population gain. Tarver and Beale's paper, "Population Trends of Southern Nonmetropolitan Towns, 1950 to 1960" provides substantial support for the hypothesis that "both the percentage and numerical population increases rise as the size of town increases" (p. 22).

Glenn V. Fuguitt, in a 1964 paper entitled, "Growing and Declining Villages in Wisconsin 1950-1960" evaluated the relationship between size of place and population growth. Fuguitt reported that "size of place has been related to growth in many studies, and virtually all of them have shown larger villages growing more rapidly, or more likely to be growing than smaller ones" (p. 12). His analysis of Wisconsin villages revealed a small but positive association between



size of place and population growth between 1950 and 1960.

The study demonstrated that even for small places (less than 2,500), size of place had a positive relationship to population growth.

These studies suggest that size of place may be an important variable affecting population growth patterns. While they deal primarily with smaller places they provide valuable information on methodology and point to the direction further research should take.



### HYPOTHESES

The review of literature reveals a number of investigations dealing with population growth patterns and human well being. It provides insight into the problems of studying population growth patterns and suggests methods and techniques which could be used. Most important, however, the literature review discloses valuable information uncovered in earlier studies which can be used to develop sound, testable hypotheses about population growth patterns. The following are the hypotheses arising from the literature which will be tested in this thesis.

#### Rural - Urban

1. There are no significant differences in the population growth patterns of rural and urban places, as defined by the traditional census cut-off point of 1000 inhabitants, in Alberta between 1956 and 1979.
2. There are no significant differences in the population growth patterns of rural and urban places, as defined by the traditional census cut-off point of 1000 inhabitants in Alberta between each of the five year periods from 1956 to 1979.
3. There are no significant differences in the population growth patterns of rural and urban places in 1956, as defined by the traditional census cut-off point of 1000





inhabitants, in Alberta between each of the five year periods from 1956 to 1979.

4. There are no significant differences in the population growth patterns of rural and urban places, as defined by census metropolitan areas and non-metropolitan areas in Alberta between 1956 and 1979.

5. There are no significant differences in the population growth patterns of rural and urban places, as defined by census metropolitan areas and non-metropolitan areas in Alberta between each of the five year periods from 1956 to 1979.

#### Related Factors

6. There are no significant differences in the population growth patterns of places located in different distance categories from the nearest dominant urban place between 1956 and 1979.

7. There are no significant differences in the population growth patterns of places located in different distance categories from the nearest dominate urban place in each of the five year periods from 1956 to 1979.

8. There are no significant differences in the population growth patterns of places located in different distance categories from each of the nearest dominant urban places between 1956 and 1979.



9. There are no significant differences in the population growth patterns of places located in different distance categories from each of the nearest dominant urban places in each of the five year periods from 1956 to 1979.

10. There are no significant differences in the population growth patterns of places located in agricultural, resource, or urban regions of Alberta between 1956 and 1979.

11. There are no significant differences in the population growth patterns of places located in agricultural, resource, or urban areas of Alberta in each of the five year periods from 1956 to 1979.

12. There are no significant differences in the population growth patterns of central and non-central places in Alberta between 1956 and 1979.

13. There are no significant differences in the population growth patterns of central and non-central places in Alberta in each of the five year periods from 1956 to 1979.

14. There are no significant differences in the population growth patterns of places in different size classifications in Alberta between 1956 and 1979.

15. There are no significant differences in the population growth patterns of places in different size classifications in Alberta between each of the five year periods from 1956 to 1979.



16. There are no significant differences in the population growth patterns of places in different size classifications in 1956 in Alberta in each of the five year periods from 1956 to 1979.



## CHAPTER III

### METHODOLOGY

#### INTRODUCTION

This study examines the population growth patterns of places located in the province of Alberta. On June 30, 1979 Alberta Municipal Affairs, Municipal Inspection and Advisory Services Branch published population figures for 352 incorporated places located in the province of Alberta.<sup>1</sup> These figures covered the population of 11 cities, 103 towns, 167 villages, 30 counties, 18 municipal districts, 20 improvement districts and 3 special areas. Population figures for Federal Indian Reserves and Army experimental ranges were not available from Alberta Municipal Affairs and as a result have been eliminated from all analysis in this study. Historical data for the 352 places listed by Alberta Municipal Affairs

---

<sup>1</sup> Note: The population statistics for 1979 represent the most recent figures submitted by the local municipality. They are not necessarily the populations for 1979. A change in the figures can only occur by submission of an affidavit upon completion of a civic census. However, because of the lack of a standard procedure for civic census taking inaccuracies may occur. Municipalities wishing to take advantage of per capita grants from the provincial government use procedures which tend to inflate actual population. On the other hand small municipalities and large open country areas find the cost of civic census prohibitive and thus rely on Canadian Census figures. This results in the population figures of these areas being out of data and inaccurate.





was obtained from the Alberta Bureau of Statistics, Treasury, publication, "Population Statistics on Cities and Towns of Alberta, 1956-1976". Where necessary the historical population counts were altered to conform with the 1979 municipal boundary.<sup>1</sup> In cases where population counts were extremely small or non-existent for some period, figures were combined to facilitate the analysis and enhance the relevance of the results. The numerical population figures for the province's 37 summer villages were added to the population totals for the county or municipal district in which they are situated. The newly incorporated villages of Beaumont and Coalhurst, for which no data was available prior to their incorporation, were also added into the population figures of the appropriate counties. The population figure for special area #4 was added to the population of special area #3 in order to provide a consistent figure for special area #3 from 1956 to 1979. The combining of the population figures for the places mentioned above resulted in the total

---

<sup>1</sup> Note: The Alberta Bureau of Statistics in preparing "Population Statistics on Cities and Towns of Alberta, 1956-1976" altered historical Census Division population counts in order to make them conform with 1975 Census Division boundaries. In addition, where complete municipalities were annexed to another the figures were altered to conform to the 1979 municipal boundary to make them consistent in all periods. For example, the population of Beverly and Jasper Place are included in the population of Edmonton in all periods rather than being listed separately before annexation and included after. Not all annexations or detachments of territory, however, have been taken into account in either of the two previously mentioned adjustments. Therefore, the population changes occurring in some places may not precisely represent the actual population growth due solely to migration and natural increase.



number of places being reduced from 352 to 312. The total population remained unchanged. A list of the 312 places examined in this study, and their 1956, 1961, 1966, 1971, 1976 and 1979 populations, is given in Appendix A. Appendix B presents the same data according to 1976 Census Divisions and by counties, municipal districts, improvement districts, and special areas.

### Significance

The statistical significance of the numerical population changes were calculated using the  $\chi^2$  (chi-square) statistic. This statistic allows the comparison of entire observed frequency distributions with expected frequencies. The computational formula is:

$$\chi^2 = \sum_{i=1}^K \frac{(f_o - f_e)^2}{f_e}$$

where  $f_o$  = the observed number in a given category,  
 $f_e$  = the expected number in that category,  
 $\sum_{i=1}^K$  = direct us to sum this ratio over all K categories, (Runyon and Haber, 1976, Chap. 17).

### Population Growth Patterns

Two indices of population growth were used in this study; percent change and percent of total growth. Percent



change is measured by the ratio  $(\frac{P_2 - P_1}{P_1})$  multiplied by 100 or the observed change in numbers divided by the number of people at the beginning of the period and the result multiplied by 100. Percent total growth is measured by  $\frac{\Delta P_i}{\Delta P} \cdot K$  where:

$\Delta P_i$  is the change in population of the places,  
 $\Delta P$  is the change in population of all places,  
 $K$  is 100, making the whole series a set of percentage figures, (Barclay, 1966, Chap. 3).

### Rural - Urban Population Growth Patterns

In examining the population growth patterns of rural and urban areas, both the traditional census definition or rural and urban, and the more recent metropolitan-non-metropolitan concept, were utilized.

Traditional Census Definition: Traditionally, the Census of Canada has designated open country areas<sup>1</sup> and incorporated places of less than 1000 persons as rural. Places of 1000 or more persons have been classified as urban. Therefore, in analyzing the data for this study Alberta's 70 open country areas consisting of 30 counties, 18 municipal districts, 20 improvement districts and two special areas<sup>2</sup>

---

<sup>1</sup> Note: Open country areas include the total population of counties, municipal districts, improvement districts and special areas not found in the incorporated centers listed as well as the population of incorporated places withdraw from analysis.

<sup>2</sup> Note: Special area #3 and #4 were combined to maintain consistency in population from 1956 to 1979.



and incorporated places of less than 1000 persons were treated as rural. Incorporated places of 1000 or more were treated as urban.

The first hypothesis (number 1, page 40) suggests that rural and urban places, as defined by the traditional census cut-off point of 1000, do not differ significantly in their population growth patterns between 1956 and 1979. In order to test this hypothesis the rural and urban populations in 1956 and in 1979 were tabulated. The percent change and percent of total growth for rural and urban places were determined and a descriptive analysis of these figures was carried out. The number of rural and urban places in 1956 and 1979 were noted and discussed.

Hypothesis two (number 2, page 40) proposes that the population growth patterns of rural and urban places are not significantly different in each of the five year periods between 1956 and 1979. First, places were classified into rural and urban classifications according to their population in 1956. The 1961 populations, for each classification, were recorded. A descriptive analysis of percent change and percent of total growth in rural and urban places between 1956 and 1961 was carried out. Next, places were classified as rural and urban according to their 1961 populations. The 1966 rural and urban populations were recorded. Percent change and percent of total growth occurring in rural and urban places between 1961 and 1966 was analyzed. Similarly, places were classified as rural and





urban according to their population in 1966 and 1971. The percent change and percent of total growth in rural and urban places was computed and analyzed. As well, places were classified into rural and urban according to their population in 1971 and the 1976 populations of the rural and urban places noted. An examination of percent change and percent of total growth in rural and urban areas during the period was carried out. Finally, places were classified as rural and urban according to population size in 1976. The 1976 and 1979 rural and urban population were determined. A descriptive analysis of the percent change and percent of total growth in rural and urban areas between 1976 and 1979 was carried out. The changes in the number of rural and urban places which occurred between each five year period were recorded and discussed.

The third hypothesis (number 3, page 40) states that the population growth patterns of rural and urban places, as defined by the traditional census cut-off point of 1000 inhabitants, in 1956, are not significantly different in each of the five year periods from 1956 to 1979. The testing of this hypothesis involved determining the rural and urban places according to the traditional census cut-off point of 1000 in 1956. The 1961, 1966, 1971, 1976 and 1979 populations of the same places were recorded. As well, for each of the five year periods a descriptive analysis of the percent change



and percent of total growth in rural and urban places, as defined by the traditional census cut-off point of 1000 in 1956 was completed.

Metropolitan-Non-metropolitan Growth: Statistics Canada designates Census Metropolitan Areas (CMA's) to encompass the "Main labour force market area of a continuous built-up area having 100,000 or more population" (Statistics Canada, 1976). Census Metropolitan Areas, therefore, recognize the regional community systems that exist around metropolitan cities and the quasi-rural nature of smaller sized places and their surrounding open country areas. In Alberta there are two designated Census Metropolitan Areas, the Edmonton Census Metropolitan Area and the Calgary Census Metropolitan Area. The Calgary Census Metropolitan Area includes only the city of Calgary. The Edmonton Census Metropolitan Area includes the city of Edmonton, the bordering County of Strathcona and all places within that county, and the bordering municipal district of Sturgeon and all places located within the municipal district. The Census definitions outlined above were used to divide the population of the 312 places studied into metropolitan (within CMA's) and non-metropolitan (outside CMA's) categories. Utilizing these classifications the population growth patterns of metropolitan and non-metropolitan places were examined.

The fourth hypothesis (number 4, page 41) purports that the population growth patterns of metropolitan and non-metropolitan places are not significantly different between



1956 and 1979. In order to test this hypothesis the metropolitan and non-metropolitan numerical populations in 1956 and 1979 were recorded. The percent change and percent of total growth for metropolitan and non-metropolitan places was determined and a descriptive analysis of the results was conducted.

Hypothesis five (number 5, page 41) purports that the population growth patterns of metropolitan and non-metropolitan places are not significantly different in each of the five year periods from 1956 to 1979. The 1956, 1961, 1966, 1971, 1976 and 1979 population of metropolitan and non-metropolitan places were tabulated. The percent change and percent of total growth which occurred in metropolitan and non-metropolitan places in each of the five year periods was examined and discussed.

#### RELATED FACTORS

The relationship between the population growth patterns in 312 Alberta places and four selected independent variables was examined. The selected variables are as follows:

- (1) distance to the nearest dominant urban place,
- (2) regional location,
- (3) central place status,
- (4) size of place.



The 312 places were (1) classified by distance to the nearest dominant urban places, (2) classified into agricultural, resource, and urban regions, (3) classified as central and non-central places and (4) classified according to size of place. Then the 1956-1979 population changes were related to each of these four factors.

Distance to the nearest dominant urban place: One factor frequently found to be related to the population growth of a city, town, or village is its location with respect to a dominant urban place. In order to determine this relationship for Alberta's cities, towns, and villages an analysis of population growth and distance was carried out. The five prairie cities: Medicine Hat, Lethbridge, Red Deer, Calgary, and Edmonton, noted by Zimmerman and Moneo (1966), and the city of Grande Prairie were selected as the dominant urban places in Alberta. The highway distances, measured in kilometers, from each of the other 5 cities, 193 towns, and 128 villages to the nearest dominant urban place were taken from the Travel Alberta Official Road Map. Next, the cities, towns, and villages, jointly referred to as places, were classified into nine distance categories (less than 41 km., 41 - 80 km., 81 - 120 km., 121 - 160 km., 161 - 200 km., 201 - 240 km., 241 - 280 km., 281 - 320 km., and over 320 km.) from the nearest dominate urban place.

The first hypothesis (number 6, page 41) dealing with distance suggests that the population growth patterns





of places would not be significantly different depending on their location with respect to dominant urban places. This hypothesis was examined by determining the total population of all places located in each of the nine distance categories from any of the dominant urban places in 1956 and 1979. As well, the percent change and percent of total growth occurring in each of the nine distance categories was computed and analyzed.

The second hypothesis (number 7, page 41) looks at the population growth patterns of places located in different distance categories from the nearest dominant urban place in each of the five year periods from 1956 to 1979 to determine if they were significantly different. The total population of all places located in each of the nine distance categories from any of the dominant urban places in 1956, 1961, 1966, 1971, 1976, and 1979 was tabulated. The percent change and percent of total growth that occurred in each of the nine distance categories in each of the five year periods was calculated and analyzed.

The third hypothesis (number 8, page 41) contends that the population growth patterns of places located in different distance categories from each of the six selected dominant urban places are not significantly different between 1956 and 1979. The 1956 and 1979 populations of places located in the nine distance categories were determined for each of the dominant urban places. The percent change and



percent of total growth that occurred in each distance category around each of the six dominant urban places was calculated and a descriptive analysis conducted.

The final hypothesis (number 9, page 42) dealing with distance infers that there are no significant differences in the population growth patterns of places located in different distance categories from each of the nearest dominant urban places in each of the five year periods from 1956 to 1979. In order to test this hypothesis the populations in 1956, 1961, 1966, 1971, 1976, and 1979 of all places located in each distance category around each of the dominant urban places was compiled. A descriptive analysis of the percent change and percent of total growth which occurred in each distance category from each dominant urban place in each of the five year periods was carried out.

### Regional Location

Alberta is divided into 70 regional administrative districts made up of 30 counties, 18 municipal districts, 20 improvement districts and two special areas.<sup>1</sup> A breakdown of the population of these regions into cities, towns, villages, and open country areas is presented in Appendix B. As noted before, the population figures of Edmonton and Calgary have been listed separately because of their size and location.

---

<sup>1</sup> Note: There are 3 special areas but for purposes of this study special area #3 and #4 are being treated as one.



The population changes of these regions were examined. The counties, municipal districts, improvement districts, and special areas were classified into agricultural, resource, and urban regions (see Appendix C). The urban regions were selected on the basis of location with respect to the six selected dominant urban places. All of the counties, municipal districts and improvement districts adjacent to the dominant urban places plus the dominant urban places were classified as urban regions. The agricultural regions were selected on the basis of labour force in agriculture. Counties, municipal districts, improvement districts and special areas with 40 percent or more of their labour force in agriculture were classified as agricultural regions. All counties, municipal districts, improvement districts and special areas not designated as urban or agricultural were classified as resource regions.

The first hypothesis (number 10, page 42) dealing with regional location suggests that the population growth patterns of places located in agricultural, resource and urban regions are not significantly different between 1956 and 1979. The population of places in agricultural, resource, and urban regions in 1956 and 1979 were determined. A descriptive analysis of the percent change and percent of total growth in each of the three regions between 1956 and 1979 was conducted.

The second hypothesis (number 11, page 42) dealing with regional location looked at the population growth patterns



of places located in agricultural, resource, and urban areas in each of the five year periods from 1956 to 1979 to determine if they were significantly different. The total agricultural, resource, and urban population was tabulated for 1956, 1961, 1966, 1971, 1976, and 1979. The percent change and percent of total growth which occurred in agricultural, resource, and urban regions in each of the five year periods was analyzed.

#### Central Place Status

Alberta's 242 incorporated cities, towns, and villages (see Appendix A) were classified into central places and non-central places. Zimmerman and Moneo's list of fifty farm cities was used to identify central places in Alberta. (See Appendix D.) Two places, Jasper and Banff, were dropped from the list of central places because of their location within the restricted development zone of the National Parks system. The first hypothesis dealing with central place status (number 12, page 42) states that there are no significant differences in the population growth patterns of central and non-central places in Alberta between 1956 and 1979. In order to test this hypothesis the total population of all central places and all non-central places in 1956 and 1979 were recorded. The percent change and percent of total growth occurring in central and non-central places was determined and analyzed.





The second hypothesis dealing with central places status (number 13, page 42) purports that the population growth patterns of central and non-central places are not significantly different in each of the five year periods between 1956 and 1979. The 1956, 1961, 1966, 1971, 1976, and 1979 populations of central and non-central places were tabulated. The percent change and percent of total growth in central and non-central places was examined in each of the five year periods from 1956 to 1979.

#### Size of Place

A number of studies have found that the size of a place is an important variable related to its population growth pattern. Seven size classifications, less than 1000; 1000 - 2,499; 2,500 - 4,999; 5,000 - 9,999; 10,000 - 29,999; 30,000 - 99,999; and 100,000 and over, were used to study the population growth patterns of the 242 cities, towns and villages examined in this paper.

The first hypothesis dealing with size of place (number 14, page 42) states that there are no significant differences in the population growth patterns of places in different size classifications between 1956 and 1979. To test this hypothesis the 1956 and 1979 populations of all places in each size classification were determined. The percent change and percent of total growth which occurred in each size classification was calculated and a descriptive analysis



of these figures was conducted. The number of places in each size classification in 1956 and 1979 were noted.

The second hypothesis dealing with size of place (number 15, page 42) proposes that the population growth patterns of different sized places are not significantly different in each of the five year periods from 1956 to 1979. Places were classified according to their size in 1956. The 1961 populations of the same places were recorded and a descriptive analysis of the percent change and percent of total growth occurring in each size classification between 1956 and 1961 was carried out. Next, places were classified according to their size in 1961 and the 1966 populations of these same places were noted. A descriptive analysis of percent change and percent of total growth which occurred in each size classification between 1961-1966 was conducted. Similarly, places were classified according to size of place in 1966 and the 1971 populations noted. The percent change and percent of total growth in each size classification between 1966 and 1971 were computed and analyzed. As well, places were classified according to size of place in 1971 and the 1976 populations of same places noted. The percent change and percent of total growth in each size classification was analyzed. Finally, places were classified according to their size in 1976 and the 1979 populations of the same places recorded. A descriptive analysis of the percent change and percent of total growth in each size classification between 1976 and 1979 was carried



out. The number of places in each size classification for each of the five year periods was examined.

The third and final hypothesis dealing with size of place (number 16, page 43) states there are no significant differences in the population growth patterns of places in different size classifications in 1956 in each of the five year periods from 1956 to 1979. To test this hypothesis, places were classified into different size classifications according to size of place in 1956. The 1956, 1961, 1966, 1971, 1976, and 1979 populations of each size classification were determined. A descriptive analysis of the percent change and percent of total growth in each size classification was carried out for each of the five year periods from 1956 to 1979. The population growth patterns of different periods were compared to each other. The  $\chi^2$  (chi-square) statistic was calculated on the numerical populations in each period examined to determine if the growth patterns between various classifications were significantly different.



## CHAPTER IV

### RESULTS

#### INTRODUCTION

The population growth patterns of 312 places in the province of Alberta are examined in this study. Population, percent change, and percent of total growth for each place in Alberta between 1956 and 1979 are given in Appendix A. Alberta's fastest growing place between 1956 and 1979 was Spruce Grove with a 2622.01 percent change in population. Fort McMurray and St. Albert were close behind with population changes of 2224.50 percent and 2075.61 percent respectively. The largest decline in population, a 76.99 percent decrease occurred in I.D. #7. The second and third largest losses of population occurred in the village of Gadsby with a 66.90 percent decline and I.D. #8 with a 53.65 percent decline. The village of Kinuso declined by only one person between 1956 and 1979, and I.D. #21 increased by only 13 people over this period. The total population of Alberta increased by 81.97 percent between 1956 and 1979. This growth, however, was unevenly distributed. The city of Calgary alone accounted for 37.50 percent of the total growth. Calgary was followed closely by Edmonton, which accounted for 27.03 percent of the total growth. Together these two cities accounted for 64.53





percent of the total growth between 1956 and 1979. If the growth, which occurred in the county of Strathcona (4.11%), the county of Parkland (1.27%), Fort McMurray (2.73%), Grande Prairie (1.56%), Lethbridge (2.45%), Medicine Hat (1.72%), Red Deer (2.98%), and St. Albert (3.03%) are added to the Edmonton (27.03%) and Calgary (37.50%) figures, it becomes apparent that 10 places accounted for 84.38 percent of the total growth. All other places in Alberta accounted for less than one percent of the total growth each. The 10 places mentioned above accounted for 47.95 percent of total population in 1956 and 64.35 percent in 1979.

#### RURAL-URBAN POPULATION GROWTH PATTERNS

Two operational definitions of rural and urban were used in this study. First, rural and urban were operationalized using the traditional census definition. In this analysis open country areas and incorporated places of less than 1000 were defined as rural. Incorporated places of more than 1000 were defined as urban. Following this, rural and urban were operationalized using the metropolitan-non-metropolitan concept. In this analysis Census Metropolitan Areas (CMA's) as designated by Statistics Canada were considered urban. Places not located within a CMA were considered rural.

Traditional Census Definition: Hypothesis number one (number 1, page 40) states that there are no significant differences in the population growth patterns of rural and



urban places, as defined by the traditional census cut-off point of 1000 inhabitants, in Alberta between 1956 and 1979. The  $\chi^2$  (chi-square) statistic was calculated on rural and urban populations and was found to be significant at the .01 level. It can be seen from Table 1 that rural places declined in population between 1956 and 1979, while urban places increased by almost one and a half times. The 2.01 percent decline in rural population came about as the result of a 0.31 percent decline in open country areas and a 13.25 percent decline of incorporated places of less than 1000. Urban places increased in population by 148.64 percent and accounted for all of the growth which occurred in Alberta. Part of the growth in urban places can be attributed to a decline in the number of rural places. A total of 46 places classified as rural in 1956 had been reclassified urban as a result of their population increasing to 1000 or more by 1979.

The second hypothesis (number 2, page 40) states that there are no significant differences in the population growth patterns of rural and urban places, as defined by the traditional census cut-off point of 1000 inhabitants, in Alberta between each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated for comparison of rural and urban population change in each of the five year periods. All were found to be significant at the .01 level. Table 2 shows that places defined as rural and urban in 1956



TABLE 1

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH, RURAL AND URBAN,  
ACCORDING TO TRADITIONAL CENSUS CUT-OFF  
POINT OF 1000 IN ALBERTA, 1956-1979

Locality	1956		1979		Percent Change	Percent of Total Growth
	No. of Places	Population	No. of Places	Population		
RURAL:						
Open Country	70	424,935	70	423,603	-0.31	-0.15
Incorporated Places (less than 1000)	185	64,109	139	55,616	-13.25	-0.94
Total Rural	255	489,044	209	479,219	-2.01	-1.09
URBAN:						
Incorporated Places (1000 or more)	57	616,012	103	1,531,645	148.64	101.09
Rural and Urban Total	312	1,105,056	312	2,010,868	81.97	100.00



TABLE 2

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH, RURAL-URBAN ACCORD-  
ING TO TRADITIONAL CENSUS CUT-OFF POINT OF  
1000 IN 1956, ALBERTA, 1956-1961

Locality	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1961		
RURAL:					
Open Country	70	424,935	418,254	-1.57	-3.20
Incorporated Places (less than 1000)	185	64,109	81,144	26.57	8.15
Total Rural	255	489,044	499,498	2.12	4.95
URBAN:					
Incorporated Places (1000 or more)	57	616,013	814,666	32.25	95.05
Rural and Urban Total	312	1,105,057	1,314,064	18.91	100.00





both had population increases between 1956 and 1961. The modest 2.12 percent change in rural places consisted of a 1.57 percent decline in open country areas and a 26.57 percent increase in population of incorporated places of less than 1000. During the 1956 to 1961 period urban places increased by 32.25 percent and accounted for 95.05 percent of the total growth.

Table 3 shows that between 1961 and 1966 places defined as rural in 1961 declined by 3.99 percent. This decline occurred as the result of a 6.50 percent decline in open country areas and a 12.19 percent increase in the population of incorporated places of less than 1000. Urban places increased by 17.77 percent and accounted for all growth in Alberta between 1961 and 1966. Rural and urban places together increased by 9.76 percent between 1961 and 1966. This figure shows a slow down in growth when compared to the 18.91 percent change in total rural and urban population between 1956 and 1961.

Table 4 shows a 0.86 percent decline in places defined as rural in 1966 between 1966 and 1971. During this period rural open country areas declined by 3.50 percent and incorporated places of less than 1000 increased by 14.80 percent. Urban places increased by 16.95 percent, slightly slower than in the 1961-1966 period. Urban places accounted for all of the total growth between 1966 and 1971. Total population increased faster in the 1966 to 1971 period than



TABLE 3

NUMBER OF PLACES, POPULATION PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH, RURAL-URBAN ACCORD-  
ING TO TRADITIONAL CENSUS CUT-OFF POINT OF  
1000 IN 1961, ALBERTA, 1961-1966

Locality	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1966		
RURAL:					
Open Country	70	418,254	391,053	-6.50	-21.20
Incorporated Places (less than 1000)	173	65,140	73,079	12.19	6.19
Total Rural	243	483,394	464,132	-3.99	-15.01
URBAN:					
Incorporated Places (1000 or more)	69	830,670	978,237	17.77	115.01
Rural and Urban Total	312	1,314,064	1,442,369	9.76	100.00



TABLE 4

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH, RURAL-URBAN ACCORD-  
ING TO TRADITIONAL CENSUS CUT-OFF POINT OF  
1000 IN 1966, ALBERTA, 1966-1971

Locality	No. of Places	Population		Percent Change	Percent of Total Growth
		1966	1971		
RURAL:					
Open Country	70	391,053	377,360	-3.50	-8.40
Incorporated Places (less than 1000)	168	65,859	75,605	14.80	5.98
Total Rural	238	456,912	452,965	-0.86	-2.42
URBAN:					
Incorporated Places (1000 or more)	74	985,457	1,152,456	16.95	102.42
Rural and Urban Total	312	1,442,369	1,605,421	11.31	100.00



in the previous period inspite of a slow down in urban growth. This was made possible by an increase in the growth of incorporated places of less than 1000 and a slow down in the decline occurring in open country areas.

Table 5 shows that between 1971 and 1976 places defined as rural in 1971 increased by 8.57 percent. Rural open country areas, which had decline in all of the three previous five year periods, showed a dramatic reversal in their population growth patterns increasing by 7.79 percent in the 1971 to 1976 period. Incorporated places of less than 1000 increased by 13.43 percent. Total rural growth accounted for 17.90 percent of all growth. While urban places continued to grow faster (14.72%) than rural (8.57%) the percent of the total growth occurring in urban places was reduced to only 82.10 percent. Total rural and urban population increased by 13.04 percent between 1971 and 1976, higher than the two previous periods but well below the 18.91 percent change in population recorded in the 1956-1961 period.

Table 6<sup>1</sup> shows a 5.55 percent increase in the population of places defined as rural in 1976 between 1976 and 1979. During this period open country areas increased

---

<sup>1</sup> Note: 1976-1979 is only a three year period, therefore, percent change in population will not be directly comparable with the previous five year periods.





TABLE 5

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH, RURAL-URBAN ACCORD-  
ING TO TRADITIONAL CENSUS CUT-OFF POINT OF  
1000 IN 1971, ALBERTA, 1971-1976

Locality	No. of Places	Population		Percent Change	Percent of Total Growth
		1971	1976		
RURAL:					
Open Country	70	377,360	406,766	7.79	14.05
Incorporated Places (less than 1000)	158	60,078	68,148	13.43	3.86
Total Rural	228	437,438	474,914	8.57	17.90
URBAN:					
Incorporated Places (1000 or more)	84	1,167,983	1,339,873	14.72	82.10
Rural and Urban Total	312	1,605,421	1,814,787	13.04	100.00



TABLE 6

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH, RURAL-URBAN ACCORD-  
ING TO TRADITIONAL CENSUS CUT-OFF POINT OF  
1000 IN 1976, ALBERTA, 1976-1979

Locality	No. of Places	Population		Percent Change	Percent of Total Growth
		1976	1979		
RURAL:					
Open Country	70	406,766	423,603	4.14	8.59
Incorporated Places (less than 1000)	149	57,863	66,805	15.45	4.56
Total Rural	219	464,629	490,408	5.55	13.15
URBAN:					
Incorporated Places (1000 or more)	93	1,350,158	1,520,460	12.61	86.85
Rural and Urban Total	312	1,814,787	2,010,868	10.81	100.00



by 4.14 percent<sup>1</sup> and incorporated places of less than 1000 by 15.45 percent. Urban places increased by 12.61 percent. This was the only period between 1956 and 1979 that incorporated places of less than 1000 increased faster than urban places.

One of the difficulties of dealing with the population growth patterns of rural and urban places is the shifting of places from one classification to another. The number of places classified as rural and urban in each of the five year periods is listed on the appropriate tables. An examination of the data reveals that between 1956 and 1961 the number of places with 1000 or more people increased by 12. That is 12 centers that were less than 1000 in 1956 had 1000 or more people in 1961. The centers that changed classification between 1956 and 1961 were Black Diamond, Castor, Grand Centre, Grimshaw, Hinton, Lac La Biche, Okotoks, Provost, Rimbey, Valleyview, Viking, and Whitecourt. Between 1961 and 1966 there were eight places with less than 1000 inhabitants that increased in population to 1000 or more, resulting in these places being reclassified from rural to urban. There were three centers with 1000 or more inhabitants in 1961 which declined to less than 1000 by 1966, resulting

---

<sup>1</sup> Note: This figure may be underestimated as counties, M.D.'s, I.D.'s, and S.A.'s are less likely to carry out civic census than cities, towns and villages, according to Alberta Municipal Affairs personnel.



in their reclassification from urban to rural. The net result was that there were five more urban centers in 1966 than in 1961. The eight rural places which became urban during this period were Beaverlodge, Canmore, Manning, Picture Butte, Slave Lake, Spirit River, Swan Hills and Two Hills. The three urban places which became rural were Black Diamond, Okotoks, and Naton. All three of these centers increased between 1956 and 1961 but declined between 1961 and 1966. The number of places reclassified between 1966 and 1971 totalled 12. Eleven rural places increased from less than 1000 to more than 1000 inhabitants resulting in their reclassification as urban. One urban place declined to less than 1000 inhabitants making it rural. The rural places which became urban between 1966 and 1971 were Airdrie, Cochrane, Fox Creek, Grande Cache, High Level, Mayerthorpe, Morinville, Okotoks, Spruce Grove, Strathmore, and Vauxhall. The urban place in 1966 reclassified rural in 1971 was Two Hills. Between 1971 and 1976 there were 10 rural places reclassified urban as a result of their population increasing from less than 1000 to more than 1000 inhabitants. One urban place declined to less than 1000 causing it to be reclassified rural. The 10 rural places which became urban were Black Diamond, Blackfalds, Carstairs, Coronation, Falher, Gibbons, Naton, Sundre, Tofield, and Turner Valley. Vauxhall was the urban center reclassified as rural in 1976. Between 1976 and 1979 there were 10 rural places reclassified urban as a result of population growth. The places reclassified





were Bassano, Bon Accord, Elk Point, Lamont, Legal, Oyen, Sexsmith, Smoky Lake, and Two Hills. All of the reclassification which occurred between rural and urban places have had an effect on the population growth patterns of rural and urban localities.

The third hypothesis (number 3, page 40) states that there are no significant differences in the population growth patterns of rural and urban places as defined by the traditional census cut-off point of 1000 inhabitants in 1956 between each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated for comparison of rural and urban population change in each of the five year periods. They were found to be significant at the .01 level.

It can be seen from Table 7 that the numerical population of places defined as urban in 1956 increased consistently from 1956 to 1979 as did the total population of Alberta. Places defined as rural in 1956, however, did not show this same consistent upward trend in population growth. Rural places increased between 1956 and 1961, then declined between 1966 and 1971, and increased again from 1971 to 1979. Rural incorporated places of less than 1000 inhabitants increased consistently from 1956 to 1979. This pattern was typical of urban places and Alberta as a whole. Open country areas were unique in that they declined consistently from 1956 until 1971. From 1971 on, however, open country areas reversed this pattern and began to increase in population.



TABLE 7

NUMBER OF PLACES, POPULATION, RURAL-URBAN ACCORDING TO  
TRADITIONAL CENSUS CUT-OFF POINT OF 1000 IN 1956,  
ALBERTA, 1956-1979

Locality	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
RURAL:							
Open Country	70	424,935	418,254	391,053	377,360	406,766	423,603
Incorporated Places (less than 1000)	185	64,109	81,144	92,935	105,583	127,687	152,710
Total Rural	255	489,044	499,398	483,988	482,943	534,453	576,313
URBAN:							
Incorporated Places (1000 or more)	57	616,012	814,666	958,381	1,122,478	1,280,334	1,434,555
Rural and Urban Total	312	1,105,056	1,314,064	1,442,369	1,605,421	1,814,787	2,010,868



The 1979 population remained slightly below the 1956 high of 424,935 people.

Table 8 shows that the percent change in the population of urban places declined consistently from 1956 and 1979. In other words, although the population of urban areas increased in each five year period, the increase was slower in each successive period. In rural places the changes were much less consistent. There was a small 2.12 percent increase in population between 1956 and 1961 followed by 3.09 percent and 0.22 percent decline in the 1961-1966 and 1966-1971 periods respectively. Then between 1971 and 1976, rural areas increased by 10.67 percent and then in only three years from 1976 to 1979 they increased by another 7.83 percent. Rural incorporated places of less than 1000 had the largest percent change (26.57%) between 1956 and 1961. They then declined through the 1961-1966 period reaching a low of 13.61 percent in the 1966-1971 period. Incorporated places of less than 1000 then made a dramatic recovery in the 1971-1976 and 1976-1979 periods with percent change in population exceeding all other localities in both of these periods. Open country areas had population losses in all periods from 1956 to 1971 with the largest decline (6.50%) occurring in the 1961 to 1966 period. This decline was reversed in the 1971 to 1976 period and growth was maintained through the 1976 to 1979 period.

Table 9 shows that the percent of the total growth which occurred in places defined as rural and urban in 1956



TABLE 8

NUMBER OF PLACES, PERCENT CHANGE, RURAL-URBAN ACCORDING TO TRADITIONAL  
CENSUS CUT-OFF POINT OF 1000 IN 1956, ALBERTA BY FIVE YEAR PERIODS  
FROM 1956 TO 1979

Locality	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
RURAL:						
Open Country	70	-1.57	-6.50	-3.50	7.79	4.14
Incorporated Places (less than 1000)	185	26.57	14.53	13.61	20.94	19.60
Total Rural	255	2.12	-3.09	-0.22	10.67	7.83
URBAN:						
Incorporated Places (1000 or more)	57	33.11	17.64	17.12	14.06	12.05
Rural and Urban Total	312	18.91	9.76	11.31	13.04	10.81





TABLE 9

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH, RURAL AND URBAN ACCORDING TO  
TRADITIONAL CENSUS CUT-OFF POINT OF 1000 IN 1956,  
ALBERTA BY FIVE YEAR PERIODS FROM 1956-1979

Locality	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
RURAL:						
Open Country	70	-3.20	-21.20	-8.40	14.05	8.59
Incorporated Places (less than 1000)	185	8.15	9.19	7.76	10.56	12.77
Total Rural	255	4.95	-12.01	-0.64	24.60	21.35
URBAN:						
Incorporated Places (1000 or more)	57	95.05	112.01	100.64	75.40	78.65
Rural and Urban Total	312	100.00	100.00	100.00	100.00	100.00



shifted substantial from urban localities prior to 1971 to rural localities after 1971. Prior to 1971 virtually all population growth occurred in urban areas, but between 1971 and 1976 only 75.40 percent occurred in urban places and only 78.65 percent in the 1976-1979 period. Although urban areas continue to have more than their proportional share of total population growth the decrease in this proportion after 1971 was substantial.

Metropolitan-Non-metropolitan Growth: Hypothesis number four (number 4, page 41) states that there are no significant differences in the population growth patterns of rural and urban places, as defined by Census Metropolitan Areas and Non-metropolitan Areas in Alberta between 1956 and 1979. The  $\chi^2$  (chi-square) statistic was calculated on the metropolitan and non-metropolitan populations and was found to be significant at the .01 level. It can be seen from Table 10 that metropolitan places increased by 142.57 percent and accounted for 73.31 percent of total growth between 1956 and 1979. Non-metropolitan places increased by 37.82 percent and accounted for 26.69 percent of the total growth.

Hypothesis five (number 5, page 41) states that there are no significant differences in the population growth patterns of rural and urban places, as defined by Census Metropolitan Areas and Non-metropolitan Areas in Alberta between each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated for comparison of



TABLE 10  
POPULATION, PERCENT CHANGE, PERCENT OF TOTAL GROWTH,  
METROPOLITAN AND NON-METROPOLITAN, ALBERTA  
1956-1979

Classification	Population		Percent Change	Percent of Total Growth
	1956	1979		
Metropolitan	465,762	1,129,811	142.57	73.31
Non-metropolitan	639,294	881,057	37.82	26.69
All Places	1,105,056	2,010,868	81.97	100.00



metropolitan and non-metropolitan population change in each of the five year periods and found to be significant at the .01 level.

It can be seen from Table 11 that population has increased consistently in both metropolitan and non-metropolitan localities between 1956 and 1979. The increases in metropolitan localities were considerably larger than in non-metropolitan localities with population growing from less than the non-metropolitan in 1956 to substantially more in 1979.

Table 12 shows that the percent change in population of metropolitan areas had a downward trend from 1956 to 1979. While metropolitan places increased by 36.49 percent between 1956 and 1961 they increased by only 10.36 percent between 1976 and 1979. Non-metropolitan places, however, increased by 6.11 percent between 1956 and 1961 but increased by only 1.27 percent between 1961 and 1966. From then on non-metropolitan growth increased to 11.91 percent in the 1971-1976 period and 11.39 percent in the 1976-1979 period. During the 1976-1979 period the percent change in non-metropolitan population exceeded the percent change in population in metropolitan places for the first time between 1956 and 1979.

Table 13 shows that, while metropolitan places accounted for over 80 percent of the total growth in all periods prior to 1971, the growth of metropolitan places declined sharply after 1971 to 59.78 percent in the 1971-1976 period





TABLE 11  
POPULATION, METROPOLITAN-NON-METROPOLITAN ALBERTA,  
1956-1979

Classification	Population					
	1956	1961	1966	1971	1976	1979
Metropolitan	465,762	635,717	755,443	898,629	1,023,796	1,129,811
Non-metropolitan	639,294	678,347	686,926	706,792	790,991	881,057
All Places	1,105,056	1,134,064	1,442,369	1,605,421	1,814,787	2,010,868



TABLE 12

PERCENT CHANGE IN POPULATION, METROPOLITAN-NON-METROPOLITAN  
ALBERTA BY FIVE YEAR PERIODS, 1956-1979

Classification	Percent Change				
	1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Metropolitan	36.49	18.83	18.95	13.93	10.36
Non-metropolitan	6.11	1.27	2.89	11.91	11.39
All Places	18.91	9.76	11.31	13.04	10.81

TABLE 13

PERCENT OF TOTAL GROWTH IN POPULATION, METROPOLITAN-NON-METROPOLITAN,  
ALBERTA BY FIVE YEAR PERIODS, 1956-1979

Classification	Percent of Total Growth				
	1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Metropolitan	81.32	93.31	87.82	59.78	54.07
Non-metropolitan	18.68	6.69	12.18	40.22	45.93
All Places	100.00	100.00	100.00	100.00	100.00



and to 54.07 percent of the total growth between 1976 and 1979. Non-metropolitan, accounting for only 6.69 percent of the total growth between 1961 and 1966, accounted for 45.93 percent of the total growth between 1976 and 1979.

### RELATED FACTORS

The relationship between population growth and (1) distance to the nearest dominant urban place; (2) regional location; (3) central place status; and (4) size of place are examined in this section.

Distance to the nearest dominant urban place: The first hypothesis dealing with distance (number 6, page 41) states that there are no significant differences in the population growth patterns of places located in different distance categories from the nearest dominant urban place between 1956 and 1979.  $\chi^2$  (chi-square) tests were calculated on the populations located in different categories and found to be significant at the .01 level. Table 14 shows that places located closer than 41 km. and more than 200 km. from the nearest dominant urban place had larger percent changes in population than did places located between 41 and 200 km. from the nearest dominant urban place. The largest percent of the total growth occurred in places closer than 121 km. and more than 320 km. from the nearest dominant urban place. Places between 121 and 320 km. from the nearest dominant urban place accounted for substantially less of the total



TABLE 14

NUMBER OF PLACES, POPULATION, PERCENT CHANGE, PERCENT OF TOTAL  
GROWTH BY DISTANCE CATEGORY FROM THE NEAREST DOMINANT URBAN  
PLACE, ALBERTA, 1956-1979

Distance Category	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Less than 41 km.	28	28,677	110,886	286.67	9.08
41 - 80 km.	52	41,142	72,181	75.44	3.45
81 - 120 km.	62	40,902	76,069	86.25	3.88
121 - 160 km.	35	18,030	29,849	65.55	1.30
161 - 200 km.	24	26,342	45,578	73.02	2.12
201 - 240 km.	15	8,241	17,016	106.48	0.97
241 - 280 km.	12	7,067	19,312	138.82	1.35
281 - 320 km.	4	1,975	13,304	573.62	1.25
320 +	4	1,110	33,074	2879.64	3.53
Total Places	236	173,486	417,269	140.52	29.91
Dominant Urban	6	506,636	1,169,996	130.93	73.23
Open Country	70	424,935	423,603	0.31	0.15
TOTAL	312	1,105,057	2,010,868	81.97	100.00





growth occurring in the province between 1956 and 1979.

The second hypothesis dealing with distance (number 7, page 41) states that there are no significant differences in the population growth patterns of places located in different distance categories from the nearest dominant urban place in each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated for comparison of population change in the nine distance categories in each of the five year periods between 1956 and 1979. They were found to be significant at the .01 level.

Table 15 shows that numerical population increased in all categories in all periods between 1956 and 1979. It can be seen from Table 16 that the largest percent change in population (272.20%) occurred in the 281 - 320 km. category between 1956 and 1961. The second largest percent change (241.39%) occurred in the over 320 km. category between 1966 and 1971. No consistent patterns of growth appeared evident but places nearer than 41 km. and further than 320 km. from the nearest dominant urban places tended to increase in population faster than places located between 41 and 320 km. Table 17 shows that in all periods places located within 160 km. of the nearest dominant urban place accounted for more than 50 percent of the total growth. After 1966 places located more than 320 km. from the nearest dominant urban place accounted for a substantially increased amount of the total growth. This was due largely to the growth of Fort McMurray.



TABLE 15

NUMBER OF PLACES, POPULATION, BY DISTANCE CATEGORY FROM THE  
NEAREST DOMINANT URBAN PLACE ALBERTA, 1956-1979

Distance Category	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 41 km.	28	28,677	35,751	43,322	54,005	85,758	110,886
41 - 80 km.	52	41,142	46,388	50,002	53,051	61,521	72,181
81 - 120 km.	62	40,902	48,740	55,733	58,529	66,383	76,069
121 - 160 km.	35	18,030	21,805	22,894	25,535	27,541	29,849
161 - 200 km.	24	26,342	29,737	34,040	38,263	40,812	45,578
201 - 240 km.	15	8,241	11,182	13,688	14,496	15,437	17,016
241 - 280 km.	12	7,067	8,645	11,812	13,085	16,002	19,312
281 - 320 km.	4	1,975	7,351	8,655	9,797	12,360	13,304
320 +	4	1,110	1,186	3,322	11,341	21,536	33,074
TOTAL	236	173,486	210,785	243,468	278,102	347,350	407,269



TABLE 16

NUMBER OF PLACES, PERCENT CHANGE BY DISTANCE CATEGORY FROM THE  
NEAREST DOMINANT URBAN PLACE, ALBERTA BY FIVE YEAR PERIODS FROM  
1956-1979

Distance Category	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	28	24.67	21.18	24.66	58.80	29.30
41 - 80 km.	52	12.75	7.79	6.10	15.97	17.33
81 - 120 km.	62	19.16	14.35	5.02	13.42	14.59
121 - 160 km.	35	20.94	4.99	11.54	7.86	8.38
161 - 200 km.	24	12.89	14.47	12.41	6.66	11.68
201 - 240 km.	15	35.69	22.41	5.90	6.49	10.23
241 - 280 km.	12	22.33	36.63	10.78	22.29	20.69
281 - 320 km.	4	272.20	17.74	13.20	26.16	7.64
320 +	4	6.85	180.10	241.39	89.90	53.58
TOTAL	236	21.50	15.51	14.23	24.90	17.25



TABLE 17

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY DISTANCE CATEGORY FROM THE  
NEAREST DOMINANT URBAN PLACE, ALBERTA BY FIVE YEAR PERIODS FROM  
1956 TO 1979

Distance Category	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	28	3.39	5.90	6.55	15.17	12.82
41 - 80 km.	52	2.51	2.82	1.87	4.05	5.44
81 - 120 km.	62	3.75	5.45	1.72	3.75	4.94
121 - 160 km.	35	1.81	0.85	1.62	0.96	1.18
161 - 200 km.	24	1.62	3.35	2.59	1.22	2.43
201 - 240 km.	15	1.41	1.95	0.50	0.45	0.81
241 - 280 km.	12	0.76	2.47	0.78	1.39	1.69
281 - 320 km.	4	2.57	1.02	0.70	1.22	0.48
320 +	4	0.04	1.67	4.92	4.87	5.88
TOTAL	236	17.85	25.47	21.24	33.08	30.56





The third hypothesis dealing with distance (number 8, page 41) states that there are no significant differences in the population growth patterns of places located in different distance categories from each of the nearest dominant urban places between 1956 and 1979.  $\chi^2$  (chi-square) tests were calculated on the populations located in different distance categories from each of the dominant urban places. They were all found to be significant at the .01 level. It can be seen from Table 18 that numerical population increased in all distance categories from Medicine Hat between 1956 and 1979. The largest percent change in population, as well as, the largest percent of total growth occurred in the 81 - 120 km. category. No apparent patterns were evident in either percent change or percent of the total growth around Medicine Hat between 1956 and 1979.

Table 19 shows that places in all categories located nearer to Lethbridge than to any of the other dominant urban places, increased in population from 1956 to 1979. The largest percent change in population occurred in the 81 - 121 km. category. This category also accounted for the largest percent of the total growth. There were no places located between 121 and 160 km. or more than 200 km. from Lethbridge that were not closer to another dominant place. No consistent patterns of growth were identified around Lethbridge. The 81 - 120 km. category was the fastest growth category around both Lethbridge and Medicine Hat.



TABLE 18

NUMBER OF PLACES, POPULATION, PERCENT CHANGE, PERCENT OF TOTAL GROWTH  
BY DISTANCE CATEGORY FROM MEDICINE HAT, 1956-1979

Distance	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Less than 41 km.	2	2,233	3,809	70.58	0.17
41 - 80 km.	2	1,226	1,621	32.22	0.04
81 - 120 km.	4	3,298	9,003	172.98	0.63
121 - 160 km.	4	1,568	2,079	32.59	0.06
161 - 200 km.	1	562	1,008	79.36	0.05
201 - 240 km.	1	154	231	50.00	0.01
241 - 280 km.	1	305	308	0.98	0.00
281 - 320 km.	0	-	-	-	-
320 +	0	-	-	-	-
Total	15	9,346	18,059	93.23	0.96
Other Places	221	164,140	399,210	143.21	25.95
Total Places	236	173,486	417,269	140.52	26.91
Major Cities	6	506,636	1,169,996	130.93	73.23
Open Country	70	424,935	423,603	0.31	0.15
TOTAL	312	1,105,057	2,010,868	81.97	100.00



TABLE 19

NUMBER OF PLACES, POPULATION, PERCENT CHANGE, PERCENT OF TOTAL GROWTH,  
BY DISTANCE CATEGORY FROM LETHBRIDGE, 1956-1979

Distance Category	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Less than 41 km.	6	7,682	10,956	42.62	0.36
41 - 80 km.	8	10,223	13,514	32.19	0.36
81 - 120 km.	9	5,796	10,494	81.06	0.52
121 - 160 km.	0	-	-	-	-
161 - 200 km.	1	7,029	7,340	4.43	0.003
201 - 240 km.	0	-	-	-	-
241 - 280 km.	0	-	-	-	-
281 - 320 km.	0	-	-	-	-
320 +	0	-	-	-	-
Total	24	30,730	42,304	37.66	1.28
Other Places	212	142,756	374,965	162.66	25.64
Total Places	236	173,486	417,269	140.52	26.91
Major Cities	6	506,636	1,169,996	130.93	73.23
Open Country	70	424,935	423,603	0.31	0.15
TOTAL	312	1,105,057	2,010,868	81.97	100.00



It can be seen from Table 20 that all places located nearer to Red Deer than any of the other dominant urban places increased in population in all categories between 1956 and 1979. All of these places were located within 240 km. of Red Deer. Both the largest percent change (130.59%) and the largest percent of the total growth (0.99%) occurred within 40 km. of Red Deer. Places between 121 - 160 km. of Red Deer had the smallest percent change in population (12.38%). This was less than half as fast as any other category. The percent of the total growth tended to decrease as distance from Red Deer increased.

Table 21 shows that places located in all distance categories from Grande Prairie increased in population from 1956 to 1979. The growth, however, was unevenly distributed among the categories. Places less than 41 km. from Grande Prairie had the fastest growth with a 172.71 percent change in population while places between 241 - 280 km. accounted for the largest amount of total growth (0.86%).

It can be seen from Table 22 that all places located nearer to Calgary than to any of the other dominant urban places, were within 200 km. of the city. All categories less than 200 km. from Calgary showed population growth between 1956 and 1979. The largest percent change in population occurred in places located less than 41 km. from Calgary. The percent of the total growth accounted for tended to decrease as the distance from Calgary increased.





TABLE 20

NUMBER OF PLACES, POPULATION, PERCENT CHANGE, PERCENT OF TOTAL GROWTH,  
BY DISTANCE CATEGORY FROM RED DEER, 1956-1979

Distance Category	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Less than 41 km.	6	6,833	15,756	130.59	0.99
41 - 80 km.	10	9,062	14,979	65.30	0.65
81 - 120 km.	10	8,441	14,694	74.08	0.69
121 - 160 km.	9	3,038	3,414	12.38	0.04
161 - 200 km.	3	1,379	1,866	35.32	0.05
201 - 240 km.	2	675	910	34.82	0.03
241 - 280 km.	0	-	-	-	-
281 - 320 km.	0	-	-	-	-
320 +	0	-	-	-	-
Total	40	29,428	51,619	75.41	2.45
Other Places	196	144,058	365,650	153.82	24.46
Total Places	236	173,486	417,269	140.52	26.91
Major Cities	6	506,636	1,169,996	130.92	73.23
Open Country	70	424,935	423,603	0.31	0.15
TOTAL	312	1,105,057	2,010,868	81.97	100.00



TABLE 21

NUMBER OF PLACES, POPULATION, PERCENT CHANGE, PERCENT OF TOTAL GROWTH,  
BY DISTANCE CATEGORY FROM GRANDE PRAIRIE, 1956-1979

Distance Category	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Less than 41 km.	4	1,385	3,777	172.71	0.26
41 - 80 km.	2	1,167	1,558	33.51	0.04
81 - 120 km.	3	2,714	5,247	93.33	0.28
121 - 160 km.	3	660	1,047	58.64	0.04
161 - 200 km.	8	7,182	14,969	108.42	0.86
201 - 240 km.	2	0	2,905	∞	0.32
241 - 280 km.	2	1,032	1,445	40.02	0.05
281 - 320 km.	0	-	-	-	-
320 +	3	0	7,272	0	0.80
Total	27	14,140	38,220	142.48	2.66
Other Places	209	159,346	379,049	137.88	24.26
Total Places	236	173,486	417,269	140.52	26.91
Major Cities	6	506,636	1,169,996	130.93	73.23
Open Country	70	424,935	423,603	0.31	0.15
TOTAL	312	1,105,057	2,010,868	81.97	100.00



TABLE 22

NUMBER OF PLACES, POPULATION, PERCENT CHANGE, PERCENT OF TOTAL GROWTH  
BY DISTANCE CATEGORY FROM CALGARY, 1956-1979

Distance Category	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Less than 41 km.	3	1,798	8,804	389.66	0.77
41 - 80 km.	12	7,516	15,716	109.10	0.91
81 - 120 km.	14	5,035	9,613	90.92	0.51
121 - 160 km.	2	2,799	6,304	125.22	0.39
161 - 200 km.	1	2,327	2,756	18.44	0.04
201 - 240 km.	0	-	-	-	-
241 - 280 km.	0	-	-	-	-
281 - 320 km.	0	-	-	-	-
320 +	0	-	-	-	-
Total	32	19,475	43,193	121.79	2.62
Other Places	204	154,011	374,076	142.89	24.30
Total Places	236	173,486	417,269	140.52	26.91
Major Cities	6	506,636	1,169,996	130.93	73.23
Open Country	70	424,935	423,603	0.31	0.15
TOTAL	312	1,105,057	2,010,868	81.97	100.00



Table 23 shows that places in all distance categories from Edmonton increased in population between 1956 and 1979. The largest percent change in population occurred in the over 320 km. category. This 2224.51 percent increase in population was the change which occurred in Fort McMurray. In general, places closer than 41 km. and more than 240 km. from Edmonton increased in population the fastest. In terms of the total growth places nearer than 120 km. and more than 240 km. accounted for the greatest amount of the total growth with places between 121 and 240 km. from Edmonton accounting for a smaller percent of the total growth between 1956 and 1979.

The fourth hypothesis dealing with distance (number 9, page 42) states that there are no significant differences in the population growth patterns of places located in different distance categories from each of the nearest dominant urban places in each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated on the populations located in different distance categories from each of the dominant urban places in each of the five year periods from 1956 to 1979. All the tests were significant at the .01 level. Table 24 gives the numerical population figures for places located in different distance categories from Medicine Hat in five year intervals from 1956 to 1979. It can be seen from Table 25 that between 1956 and 1961 places in all distance categories from Medicine Hat increased in





TABLE 23

NUMBER OF PLACES, POPULATION, PERCENT CHANGE, PERCENT OF TOTAL GROWTH  
BY DISTANCE CATEGORY FROM EDMONTON, 1956-1979

Distance Category	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Less than 41 km.	7	8,746	67,784	675.03	6.52
41 - 80 km.	18	11,948	24,793	107.51	1.42
81 - 120 km.	22	15,618	27,018	72.99	1.26
121 - 160 km.	17	9,965	17,005	70.65	0.78
161 - 200 km.	10	7,863	17,639	124.33	1.08
201 - 240 km.	10	7,412	12,970	74.99	0.61
241 - 280 km.	9	5,730	17,559	206.44	1.31
281 - 320 km.	4	1,975	13,304	573.62	1.25
320 +	1	1,110	25,802	2224.51	2.73
Total	98	70,367	223,874	218.15	16.94
Other Places	138	103,119	193,395	87.19	9.97
Total Places	236	173,486	417,269	140.52	26.91
Major Cities	6	506,636	1,169,996	130.93	73.23
Open Country	70	424,935	423,603	0.31	0.15
TOTAL	312	1,105,057	2,010,868	81.97	100.00



TABLE 24

NUMBER OF PLACES, POPULATION, BY DISTANCE CATEGORY  
FROM MEDICINE HAT, 1956-1979

Distance Category	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 41 km.	2	2,233	2,461	2,350	2,449	3,227	3,809
41 - 80 km.	2	1,226	1,351	1,367	1,365	1,510	1,621
81 - 120 km.	4	3,298	3,919	4,384	5,020	7,353	9,003
121 - 160 km.	4	1,568	1,648	1,641	1,563	1,853	2,079
161 - 200 km.	1	562	780	846	929	962	1,008
201 - 240 km.	1	154	195	191	220	231	231
241 - 280 km.	1	305	321	357	305	272	308
281 - 320 km.	0	-	-	-	-	-	-
320 +	0	-	-	-	-	-	-
TOTAL	15	9,346	10,675	11,136	11,851	15,408	18,059



TABLE 25

NUMBER OF PLACES, PERCENT CHANGE BY DISTANCE CATEGORY FROM  
MEDICINE HAT, BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	2	10.21	-4.51	4.21	31.77	18.04
41 - 80 km.	2	10.20	1.18	0.15	10.62	7.35
81 - 120 km.	4	18.83	11.87	14.51	46.47	22.44
121 - 160 km.	4	5.10	-0.43	-4.75	18.55	12.20
161 - 200 km.	1	38.79	8.46	9.81	3.55	4.78
201 - 240 km.	1	26.62	-2.05	15.18	5.00	0.00
241 - 280 km.	1	5.25	11.22	-14.57	-10.82	13.24
281 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	15	14.22	4.32	6.42	30.01	17.21



population between 5.10 percent and 38.79 percent. In all three periods between 1961 and 1976 at least one category declined in population but between 1976 and 1979 all categories were stable or gaining population once again. Table 26 shows that places located between 81 - 120 km. from Medicine Hat had the largest share of total growth in all periods between 1956 and 1979.

Table 27 shows the numerical population figures for places located nearer to Lethbridge than to any other dominant place. It can be seen from Table 28 that places nearer to Lethbridge than to any of the other dominant urban places had their largest percent change in population in the 1956-1961 period, but then declined between 1961 and 1966. In the 1971-1976 and 1976-1979 periods places close to Lethbridge (less than 41 km.) grew faster than places in any of the other categories. Table 29 shows the percent of the total growth which occurred in each distance category from Lethbridge in each five year period between 1956 and 1979. The largest percent of the total growth by places closer to Lethbridge than to any of the other dominant urban places occurred between 1971 and 1976. Between 1976 and 1979 more of this total growth shifted to places less than 41 km. from Lethbridge.

Table 30 shows the numerical population figures for places located nearer to Red Deer than any of the other dominant urban places. It can be seen from Table 31 that the





TABLE 26

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY DISTANCE CATEGORY FROM  
MEDICINE HAT, BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	2	0.11	0.01	0.06	0.37	0.30
41 - 80 km.	2	0.06	0.01	0.00	0.07	0.06
81 - 120 km.	4	0.30	0.36	0.39	1.11	0.84
121 - 160 km.	4	0.04	-0.01	-0.05	0.14	0.12
161 - 200 km.	1	0.10	0.05	0.05	0.02	0.02
201 - 240 km.	1	0.02	0.00	0.02	0.01	0.00
241 - 280 km.	1	0.01	0.03	-0.03	-0.02	0.02
281 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	15	0.64	0.36	0.44	1.70	1.35



TABLE 27  
NUMBER OF PLACES, POPULATION BY DISTANCE CATEGORY  
FROM LETHBRIDGE, 1956-1979

Distance Category	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 41 km.	6	7,682	8,047	7,459	8,014	9,383	10,956
41 - 80 km.	8	10,223	11,065	11,628	11,699	13,099	13,514
81 - 120 km.	9	5,796	8,204	8,435	9,139	9,719	10,494
121 - 160 km.	0	-	-	-	-	-	-
161 - 220 km.	1	7,029	7,083	6,302	6,738	7,292	7,340
201 - 240 km.	0	-	-	-	-	-	-
241 - 280 km.	0	-	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-	-
320 +	0	-	-	-	-	-	-
TOTAL	24	30,730	34,399	33,824	35,590	39,493	42,304



TABLE 28

NUMBER OF PLACES, PERCENT CHANGE BY DISTANCE CATEGORY FROM  
LETHBRIDGE BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	6	4.75	-7.31	7.44	17.08	16.76
41 - 80 km.	8	8.24	5.09	0.61	11.97	3.17
81 - 120 km.	9	41.55	2.82	8.35	6.35	7.97
121 - 160 km.	0	-	-	-	-	-
161 - 200 km.	1	0.77	-11.03	6.92	8.22	0.66
201 - 240 km.	0	-	-	-	-	-
241 - 280 km.	0	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	24	11.94	-1.67	5.22	10.97	7.12



TABLE 29

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY DISTANCE CATEGORY FROM  
LETHBRIDGE BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1977	1977-1979
Less than 41 km.	6	0.18	-0.46	0.34	0.65	0.80
41 - 80 km.	8	0.40	0.44	0.04	0.67	0.21
81 - 120 km.	9	1.15	0.18	0.43	0.28	0.40
121 - 160 km.	0	-	-	-	-	-
161 - 200 km.	1	0.03	-0.61	0.27	0.27	0.03
201 - 240 km.	0	-	-	-	-	-
241 - 280 km.	0	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	24	1.76	-0.45	1.08	1.86	1.43





TABLE 30

NUMBER OF PLACES, POPULATION BY DISTANCE CATEGORY  
FROM RED DEER, 1956-1979

Distance Category	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 41 km.	6	6,833	8,064	8,634	9,484	11,149	15,756
41 - 80 km.	10	9,062	10,777	12,137	12,233	13,067	14,979
81 - 120 km.	10	8,441	10,183	10,860	11,570	12,591	14,694
121 - 160 km.	9	3,038	3,351	3,154	2,986	3,262	3,414
161 - 200 km.	3	1,379	1,442	1,376	1,348	1,658	1,866
201 - 240 km.	2	675	796	872	926	888	910
241 - 280 km.	0	-	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-	-
320 +	0	-	-	-	-	-	-
TOTAL	40	29,468	34,613	37,033	38,547	42,615	51,619



TABLE 31

NUMBER OF PLACES, PERCENT CHANGE BY DISTANCE CATEGORY FROM  
RED DEER BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	6	18.02	7.07	9.85	17.56	41.32
41 - 80 km.	10	18.93	12.62	0.79	6.82	14.63
81 - 120 km.	10	20.64	6.65	6.54	8.83	16.70
121 - 160 km.	9	10.30	-5.88	-5.33	9.24	4.66
161 - 200 km.	3	4.57	-4.58	-2.04	23.00	12.55
201 - 240 km.	2	17.93	9.55	6.19	-4.10	2.48
241 - 280 km.	0	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	40	17.46	6.99	4.09	10.55	21.13



largest percent change in population around Red Deer occurred in the 1976-1979 period and in the 1956-1961 period. In all other periods at least one distance category lost population. Between 1976 and 1979 places less than 41 km. from Red Deer showed the highest percent change in population of any category in any period between 1956 and 1979. Table 32 shows that the largest percent of the total growth occurred in places within 120 km. of Red Deer. Places less than 41 km. from Red Deer in the 1976-1979 period had the largest percent of the total growth of any category in any period.

Table 33 shows the numerical population figures for places located nearer to Grande Prairie than to any of the other dominant urban places. It can be seen from Table 34 that growth around Grande Prairie was rather haphazard between 1956 and 1979. Places less than 41 km. from Grande Prairie had the largest percent change in population between 1956 and 1961 but dropped to only 6.36 percent between 1961 and 1966. In each succeeding period, however, the less than 41 km. category increased, until in 1976-1979 it was once again the fastest growing category around Grande Prairie. Table 35 shows that the percent of the total growth was unevenly distributed in different categories in different periods.

Table 36 shows the numerical population figures for places located nearer to Calgary than to any of the other dominant urban places. All places were located within 200 km. of Calgary. It can be seen from Table 37 that the percent



TABLE 32

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY DISTANCE CATEGORY FROM  
RED DEER BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	6	0.59	0.44	0.52	0.80	2.35
41 - 80 km.	10	0.82	1.06	0.06	0.40	0.98
81 - 120 km.	10	0.83	0.53	0.44	0.49	1.07
121 - 160 km.	9	0.15	-0.15	-0.01	0.13	0.08
161 - 200 km.	3	0.03	-0.05	-0.02	0.15	0.11
201 - 240 km.	2	0.06	0.06	0.03	-0.02	0.01
241 - 280 km.	0	-	-	-	-	-
280 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	40	2.46	1.89	0.93	1.94	4.59





TABLE 33  
NUMBER OF PLACES, POPULATION BY DISTANCE CATEGORY  
FROM GRANDE PRAIRIE, 1956-1979

Distance Category	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 41 km.	4	1,385	1,982	2,108	2,332	2,834	3,777
41 - 80 km.	2	1,167	1,390	1,573	1,552	1,553	1,558
81 - 120 km.	3	2,714	3,032	4,156	4,304	4,424	5,247
121 - 160 km.	3	660	716	723	1,003	1,035	1,047
161 - 200 km.	8	7,182	7,849	10,330	13,144	13,375	14,969
201 - 240 km.	2	0	914	1,702	1,659	2,298	2,905
241 - 280 km.	2	1,032	1,219	1,555	1,338	1,355	1,445
281 - 320 km.	0	-	-	-	-	-	-
320 +	3	0	0	708	4,494	6,112	7,272
TOTAL	27	14,140	17,102	22,765	29,826	32,986	38,220



TABLE 34  
NUMBER OF PLACES, PERCENT CHANGE BY DISTANCE CATEGORY FROM  
GRANDE PRAIRIE BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	4	43.11	6.36	10.63	21.53	33.28
41 - 80 km.	2	19.11	13.17	-1.34	0.06	0.32
81 - 120 km.	3	11.72	37.07	3.56	2.79	18.60
121 - 160 km.	3	8.49	0.98	38.73	3.19	1.16
161 - 200 km.	8	9.29	31.61	27.24	1.76	11.92
201 - 240 km.	2	0	86.21	-2.53	38.52	26.41
241 - 280 km.	2	18.12	27.56	-13.96	1.50	6.64
281 - 320 km.	0	-	-	-	-	-
320 +	3	0	0	534.75	36.00	18.98
TOTAL	27	20.95	33.11	31.02	10.60	15.87



TABLE 35

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY DISTANCE CATEGORY FROM  
GRANDE PRAIRIE BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	4	0.29	0.10	0.14	0.24	0.48
41 - 80 km.	2	0.11	0.14	-0.01	0.00	0.00
81 - 120 km.	3	0.15	0.88	0.09	0.06	0.42
121 - 160 km.	3	0.03	0.01	0.17	0.02	0.01
161 - 200 km.	8	0.32	1.93	1.73	0.11	0.81
201 - 240 km.	2	0.44	0.61	-0.03	0.31	0.31
241 - 280 km.	2	0.09	0.26	-0.13	0.01	0.05
281 - 320 km.	0	-	-	-	-	-
320 +	3	0	0.55	2.32	0.77	0.59
TOTAL	27	1.42	4.41	4.33	1.51	2.67



TABLE 36  
NUMBER OF PLACES, POPULATION BY DISTANCE CATEGORY  
FROM CALGARY, 1956-1979

Distance Category	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 41 km.	3	1,798	2,424	2,519	3,381	4,653	8,804
41 - 80 km.	12	7,516	8,368	8,702	9,957	12,812	15,716
81 - 120 km.	14	5,035	5,141	6,741	6,614	7,636	9,613
121 - 160 km.	2	2,799	3,098	3,728	5,563	6,243	6,304
161 - 200 km.	1	2,327	2,645	2,633	2,545	2,627	2,756
201 - 240 km.	0	-	-	-	-	-	-
241 - 280 km.	0	-	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-	-
320 +	0	-	-	-	-	-	-
TOTAL	32	19,475	21,676	24,323	28,060	33,971	43,193





TABLE 37

NUMBER OF PLACES, PERCENT CHANGE BY DISTANCE CATEGORY FROM  
CALGARY BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	3	129.37	3.92	34.22	37.62	89.21
41 - 80 km.	12	11.34	3.99	14.42	28.67	22.67
81 - 120 km.	14	2.11	31.12	-1.88	15.45	25.89
121 - 160 km.	2	10.68	20.34	49.22	12.22	0.98
161 - 200 km.	1	13.67	-0.45	-3.34	3.22	4.91
201 - 240 km.	0	-	-	-	-	-
241 - 280 km.	0	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	32	11.30	12.21	15.36	21.07	27.15



change in total population increased consistently in each succeeding five year periods from 1956 to 1979. Between 1976 and 1979 growth in the less than 41 km. category was more than three times as fast as growth in any of the other categories. Table 38 shows that the percent of the total growth occurring around Calgary also increased in each succeeding period from 1956 to 1979. During the 1976-1979 period the percent of the total growth declined as distance from Calgary increased.

Table 39 shows the numerical population figures for places located nearer to Edmonton than to any of the other dominant urban places. Places in all distance categories from Edmonton increased in population throughout all five year periods. It can be seen from Table 40 that a general U-shaped relationship exists between distance from Edmonton and population growth, with places near to and far from Edmonton growing faster than those inbetween. This relationship is especially evident in the more recent periods. Table 41 shows the percent of the total growth occurring in each category in each five year period. Since 1966 on, the less than 41 km. category and the over 320 km. category have consistently received a larger share of the total growth than any of the other categories.



TABLE 38

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY DISTANCE CATEGORY FROM  
CALGARY BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	3	0.30	0.07	0.53	0.61	2.12
41 - 80 km.	12	0.41	0.26	0.77	1.36	1.48
81 - 120 km.	14	0.05	1.25	-0.08	0.49	1.01
121 - 160 km.	2	0.14	0.49	1.13	0.33	0.03
161 - 200 km.	1	0.15	-0.01	-0.05	0.04	0.07
201 - 240 km.	0	-	-	-	-	-
241 - 280 km.	0	-	-	-	-	-
281 - 320 km.	0	-	-	-	-	-
320 +	0	-	-	-	-	-
TOTAL	32	1.05	2.06	2.29	2.82	4.70



TABLE 39  
NUMBER OF PLACES, POPULATION BY DISTANCE CATEGORY  
FROM EDMONTON, 1956-1979

Distance Category	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 41 km.	7	8,746	12,773	20,252	28,344	54,512	67,784
41 - 80 km.	18	11,948	13,437	14,595	16,245	19,480	24,793
81 - 120 km.	22	15,618	18,261	21,157	21,882	24,660	27,018
121 - 160 km.	17	9,965	12,992	13,648	14,420	15,148	17,005
161 - 200 km.	10	7,863	9,938	12,553	13,559	14,898	17,639
201 - 240 km.	10	7,412	9,277	10,923	11,691	12,020	12,970
241 - 280 km.	9	5,730	7,105	9,900	11,442	14,395	17,559
281 - 320 km.	4	1,975	7,351	8,655	9,797	12,360	13,304
320 +	1	1,110	1,186	2,614	6,847	15,424	25,802
TOTAL	98	70,367	92,320	114,297	134,227	182,897	223,874





TABLE 40

NUMBER OF PLACES, PERCENT CHANGE BY DISTANCE CATEGORY FROM  
EDMONTON BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	7	46.04	58.55	39.96	92.32	24.35
41 - 80 km.	18	12.46	8.62	11.31	19.91	27.27
81 - 120 km.	22	16.92	15.86	3.43	12.70	9.56
121 - 160 km.	17	30.38	5.05	5.66	5.05	12.26
161 - 200 km.	10	26.39	26.31	8.01	9.88	18.40
201 - 240 km.	10	25.16	17.74	7.03	2.81	7.90
241 - 280 km.	9	24.00	39.34	15.58	25.81	21.98
281 - 320 km.	4	272.20	17.74	13.20	26.16	7.64
320 +	1	6.85	120.41	161.94	125.27	67.29
TOTAL	98	31.20	23.81	17.44	36.26	22.40



TABLE 41

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY DISTANCE CATEGORY FROM EDMONTON BY FIVE YEAR PERIODS FROM 1956-1979

Distance Category	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 41 km.	7	1.93	5.83	4.96	12.50	6.77
41 - 80 km.	18	0.71	0.90	1.01	1.55	2.71
81 - 120 km.	22	1.27	2.26	0.45	1.33	1.20
121 - 160 km.	17	1.45	0.51	0.47	0.35	0.95
161 - 200 km.	10	0.99	2.04	0.62	0.64	1.40
201 - 240 km.	10	0.89	1.28	0.47	0.16	0.49
241 - 280 km.	9	0.66	2.18	0.95	1.41	1.61
281 - 320 km.	4	2.57	1.02	0.70	1.22	0.48
320 +	1	0.04	1.11	2.60	4.10	5.29
TOTAL	98	10.50	17.13	12.22	23.25	20.90



### Regional Location

The first hypothesis dealing with regional location (number 10, page 42) states that there are no significant differences in the population growth patterns of places located in agricultural, resource, or urban regions of Alberta between 1956 and 1979. The  $\chi^2$  (chi-square) statistic was calculated on the agricultural, resource, and urban populations. It was found to be significant at the .01 level. It can be seen from Table 42 that agricultural regions declined between 1956 and 1979 while resource and urban regions increased over the same period. The largest percent change in population and the largest percent of the total growth occurred in urban regions. Both the urban open country areas and cities, towns and villages increased in the 1956 to 1979 period. Open country areas in agricultural and resource regions declined in this period. Cities, towns, and villages located in agricultural and resource regions increased over the period but those located in resource regions increased almost three times as fast as those in agricultural areas.

The second hypothesis dealing with regional location (number 11, page 42) states that there are no significant differences in the population growth patterns of places located in agricultural, resource, or urban areas of Alberta in each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated for comparison



TABLE 42

NUMBER OF PLACES, POPULATION, PERCENT CHANGE AND  
PERCENT OF TOTAL GROWTH BY REGIONAL LOCATION,  
ALBERTA 1956-1979

Region	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
AGRICULTURE:					
Open Country	23	118,458	85,555	-27.78	-3.63
Cities, Towns & Villages	85	43,115	62,197	44.26	2.11
Total	108	161,573	147,752	-8.55	-1.53
RESOURCE:					
Open Country	38	208,446	189,416	-9.13	-2.10
Cities, Towns & Villages	113	101,795	248,484	144.10	16.17
Total	151	310,241	437,900	41.15	14.09
URBAN:					
Open Country	9	98,031	148,632	51.62	5.59
Cities, Towns & Villages	44	535,212	1,276,584	138.52	81.85
Total	53	633,243	1,425,216	125.07	87.43
ALL REGIONS:					
Open Country	70	424,935	423,603	-0.31	-0.15
Cities, Towns & Villages	242	680,122	1,587,265	133.38	100.15
Total	312	1,105,057	2,010,868	8.197	100.00





of agricultural, resource, and urban population change in each of the five year periods. All of the tests were found to be significant at the .01 level. Table 43 gives the numerical population figures for places located in agricultural, resource, and urban areas of Alberta in five year intervals from 1956 to 1979. It can be seen from Table 44 that agriculture and resource areas declined in all periods until 1971 but increased in population from 1971 on. Only the open country areas in agricultural regions showed a decreasing population in all periods. The cities, towns, and villages in all regions increased in population in all periods between 1956 and 1979. The percent change in population in urban cities, towns, and villages declined in each period between 1956 and 1979. After 1971 cities, towns, and villages located in urban regions increased considerably slower than cities, towns, and villages located in resource areas and only slightly faster than those located in agricultural regions. Table 45 shows that the largest percent of the total growth in all periods occurred within urban regions. The percent of the total growth occurring in urban regions declined substantially after 1971. Most of the growth lost by urban regions after 1971 was picked up by places located in resource regions. Agricultural regions, while not gaining as much of the growth as resource regions, picked up enough growth to reverse their downward trend and see population begin to increase. This change saw agricultural regions



NUMBER OF PLACES, POPULATION BY REGIONAL LOCATION,  
ALBERTA BY FIVE YEAR PERIODS FROM 1956-1979

Regional Location	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
AGRICULTURE:							
Open Country	23	118,458	111,211	101,709	90,930	85,611	85,555
Cities, Towns & Villages	85	43,115	48,947	51,411	52,262	56,338	62,197
Total	108	161,573	160,158	153,120	143,192	141,949	147,752
RESOURCE:							
Open Country	38	208,446	207,952	195,543	184,238	185,987	189,416
Cities, Towns & Villages	113	101,795	125,284	148,478	171,779	208,007	248,484
Total	151	310,241	333,236	344,021	356,017	393,994	437,900
URBAN:							
Open Country	9	98,031	99,091	93,801	102,192	135,168	148,632
Cities, Towns & Villages	44	535,212	721,579	851,427	1,004,020	1,143,676	1,276,584
Total	55	633,243	820,670	945,228	1,106,212	1,278,844	1,425,216
ALL REGIONS:							
Open Country	70	424,935	418,254	391,053	377,360	406,766	423,603
Cities, Towns & Villages	242	680,122	895,810	1,051,316	1,228,061	1,408,021	1,587,265
Total	312	1,105,057	1,314,064	1,442,369	1,605,421	1,814,787	2,010,868



NUMBER OF PLACES AND PERCENT CHANGE BY REGIONAL LOCATION  
ALBERTA BY FIVE YEAR PERIODS FROM 1956-1979

Regional Location	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
AGRICULTURE:						
Open Country	23	-6.12	-8.54	-10.60	-5.85	-0.07
Cities, Towns & Villages	85	13.53	5.03	1.66	7.80	10.40
Total	108	-0.88	-4.39	-6.48	0.87	4.09
RESOURCE:						
Open Country	38	-0.24	-5.97	-5.78	0.95	1.84
Cities, Towns & Villages	113	23.08	18.51	15.69	21.09	19.46
Total	151	7.41	3.24	3.49	10.67	11.14
URBAN:						
Open Country	9	1.08	-5.34	8.95	32.27	9.96
Cities, Towns & Villages	44	34.82	18.00	17.92	13.91	11.62
Total	53	29.60	15.18	17.03	15.61	11.45
ALL REGIONS:						
Open Country	70	-1.57	-6.50	-3.50	7.79	4.14
Cities, Towns & Villages	242	31.71	17.36	16.81	14.65	12.73
Total	312	18.91	9.76	11.31	13.04	10.81



NUMBER OF PLACES AND PERCENT OF TOTAL GROWTH BY REGIONAL LOCATION,  
ALBERTA BY FIVE YEAR PERIODS FROM 1956-1979

Regional Location	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
AGRICULTURE:						
Open Country	23	-3.47	-7.41	-6.61	-2.54	-0.03
Cities, Towns & Villages	85	2.79	1.92	0.52	1.95	2.99
Total	108	-0.68	-5.49	-6.09	0.59	2.96
RESOURCE:						
Open Country	38	0.24	-9.67	-6.93	0.84	1.75
Cities, Towns & Villages	113	11.24	18.08	14.29	17.30	20.64
Total	151	11.00	8.41	7.36	18.14	22.39
URBAN:						
Open Country	9	0.51	-4.12	5.15	15.75	6.87
Cities, Towns & Villages	44	89.17	101.20	93.59	66.70	67.78
Total	53	89.68	97.08	98.73	82.46	74.65
ALL REGIONS:						
Open Country	70	-3.20	-21.20	-8.40	14.05	8.59
Cities, Towns & Villages	242	103.20	121.20	108.40	85.96	91.41
Total	312	100.00	100.00	100.00	100.00	100.00





account for 2.96 percent of the total growth between 1976 and 1979.

### Central Place Status

The first hypothesis dealing with central place status (number 12, page 42) states that there are no significant differences in the population growth patterns of central and non-central places in Alberta between 1956 and 1979. A  $\chi^2$  (chi-square) test was calculated on the populations of central and non-central places. The result was significant at the .01 level. It can be seen from Table 46 that central places increased by 127.64 percent and accounted for 83.98 percent of the total growth between 1956 and 1979. Non-central places increased by 174.58 percent and accounted for 16.02 percent of the total growth. While non-central places increased faster the majority of growth occurred in central places.

The second hypothesis dealing with central place status (number 13, page 42) states that there are no significant differences in the population growth patterns of central and non-central places in Alberta in each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated for comparison of populations located in central and non-central places. They were found to be significant at the .01 level. It can be seen from Table 47 that the population living in central and non-central places has increased in each of the five year intervals from 1956 to 1979.



TABLE 46

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
AND PERCENT OF TOTAL GROWTH FOR CENTRAL AND  
NON-CENTRAL PLACES, ALBERTA, 1956-1979

Central Place Status	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1979		
Central	48	596,899	1,358,751	127.64	83.98
Non-central	194	83,223	228,514	174.58	16.02
Total	242	680,122	1,587,265	133.38	100.00



TABLE 47  
NUMBER OF PLACES, POPULATION FOR CENTRAL  
AND NON-CENTRAL PLACES, ALBERTA  
1956-1979

Central Place Status	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Central	48	596,899	796,462	935,499	1,092,213	1,225,784	1,358,751
Non-central	194	83,228	99,348	115,817	135,848	182,237	228,514
Total	242	680,127	895,810	1,051,316	1,228,061	1,408,021	1,587,265



Table 48 shows that the percent change in population of central places declined in each of the five year periods from 1956 to 1979. The percent change in population in non-central places fluctuated from period to period between 1956 and 1979. The percent change occurring in non-central places was substantially higher in the periods after 1971 than in previous periods.

Table 49 shows that, central places accounted for over 95 percent of the total growth in all periods prior to 1971, but this share declined sharply after 1971 to 63.80 percent between 1971 and 1976 and 67.81 percent between 1976 and 1979.

### Size of Place

The first hypothesis dealing with size of place (number 14, page 42) states that there are no significant differences in the population growth patterns of places in different size classifications in Alberta between 1956 and 1979. The  $\chi^2$  (chi-square) statistic was calculated on the populations of the different size classifications. The result was found to be significant at the .01 level. It can be seen from Table 50 that places in all size categories over 1000 increased in population between 1956 and 1979. Places of less than 1000 inhabitants declined by 13.25 percent between 1956 and 1979. The fastest change in population occurred in places between 2,500 and 4,999 and places in the





TABLE 48

NUMBER OF PLACES, PERCENT CHANGE IN CENTRAL AND NON-CENTRAL PLACES,  
BY FIVE YEAR PERIODS, 1956-1979

Central Place Status	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Central	48	33.43	17.46	16.75	12.23	10.85
Non-central	194	19.37	16.58	17.30	34.15	25.39
Total	242	31.71	17.36	16.81	14.65	12.73



TABLE 49  
NUMBER OF PLACES AND PERCENT OF TOTAL GROWTH IN CENTRAL AND  
NON-CENTRAL PLACES, ALBERTA BY FIVE YEAR PERIODS  
1956-1979

Central Places Status	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Central	48	95.48	108.36	96.11	63.80	67.81
Non-central	194	7.71	12.83	12.29	22.16	23.60
Total	242	103.19	121.20	108.40	85.61	91.41



TABLE 50

NUMBER OF PLACES, POPULATION, PERCENT CHANGE AND  
PERCENT OF TOTAL GROWTH BY SIZE, ALBERTA  
1956-1979

Size of Place	1956		1979		Percent Change	Percent of Total Growth
	No. of Places	Population	No. of Places	Population		
Less than 1000	185	64,109	139	55,616	-13.25	-0.94
1000 - 2,499	36	58,172	45	66,274	13.93	0.90
2,500 - 4,999	13	38,359	37	137,756	259.12	10.97
5,000 - 9,999	3	19,148	10	70,104	266.12	5.63
10,000 - 29,999	3	62,626	6	107,946	72.37	5.00
30,000 - 99,999	0	0	3	127,394	-	14.06
100,000 and over	2	437,708	2	1,022,175	133.53	64.52
Total	242	680,122	242	1,587,265	133.38	100.15



5,000 and 9,999 size categories. The 100,000 and over category accounted for the largest percent of the total growth between 1956 and 1979. An evaluation of exactly what this information means is difficult because of the large number of places that changed categories between 1956 and 1979. It can, however, be stated with a fair degree of confidence that these reclassifications had a major effect on the population occurring in each size category.

The second hypothesis dealing with size of place (number 15, page 42) states that there are no significant differences in the population growth patterns of places in different size classifications in each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated on the populations of the different size classifications in each of the five year periods from 1956 to 1979. All of the tests were significant at the .01 level. Table 51 shows that places in all size classifications in 1956 increased in population between 1956 and 1961. The largest percent change in population, as well as the largest percent of the total growth occurred in places of less than 2,500 and in places of more than 10,000. Places between 2,500 and 10,000 had less and slower growth than both larger and smaller places.

It can be seen from Table 52 that places in all size categories in 1961 increased in population between 1961 and 1966. The largest percent change and the second largest percent of the total growth during this period occurred in





TABLE 51

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH BY SIZE OF PLACE  
IN 1956, ALBERTA, 1956-1961

Size of Place	No. of Places	Population		Percent Change	Percent of Total Growth
		1956	1961		
Less than 1000	185	64,109	81,144	26.57	8.15
1000 - 2,499	36	58,172	70,804	21.72	6.04
2,500 - 4,999	13	38,359	44,815	16.83	3.09
5,000 - 9,999	3	19,148	22,374	16.85	1.54
10,000 - 29,999	3	62,626	79,550	27.02	8.10
30,000 - 99,999	0	0	0	0	0
100,000 and over	2	437,708	597,123	36.42	76.27
All Places	242	680,122	895,810	31.71	103.20



TABLE 52

NUMBER OF PLACES, POPULATION, PERCENT CHANGE  
PERCENT OF TOTAL GROWTH BY SIZE OF PLACE  
IN 1961, ALBERTA, 1961-1966

Size of Place	No. of Places	Population		Percent Change	Percent of Total Growth
		1961	1966		
Less than 1000	173	65,140	73,079	12.19	6.19
1000 - 2,499	40	62,829	71,787	14.26	6.98
2,500 - 4,999	20	63,494	77,930	22.74	11.25
5,000 - 9,999	4	27,674	32,089	15.95	3.44
10,000 - 29,999	2	44,096	51,745	17.35	5.96
30,000 - 99,999	1	35,454	37,186	4.89	1.35
100,000 and over	2	597,123	707,500	18.49	86.03
All Places	242	895,810	1,051,316	17.36	121.20



places of 2,500 to 4,999 inhabitants. The largest percent of the total growth and second largest percent change in population took place in places of over 100,000. Places between 30,000 and 99,999 showed the slowest growth of all places during the 1961 to 1966 period.

Table 53 shows that places in all size categories in 1966 increased in population between 1966 and 1971. Places over 100,000 had the largest percent change and the largest percent of total growth between 1966 and 1971. Places of 2,500 and 4,999 ranked second in both percent change and percent of the total growth.

Table 54 shows that places in all size categories in 1971 increased in population between 1971 and 1976. The population growth was, however, substantially different than in any of the previous periods. For the first time, middle sized places (2,500 - 29,999) had larger percent changes in population than did larger or smaller places. As well, places between 2,500 and 29,999 received a much larger percent of the total growth in the 1971-1976 period. For the first time since 1956, places with 100,000 or more people accounted for less than 75 percent of the total growth in the province.

It can be seen from Table 55 that places in all size categories in 1976 increased in population from 1976 and 1979. During this period places between 1000 and 29,999



TABLE 53

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH BY SIZE OF PLACE  
IN 1966, ALBERTA, 1966-1971

Size of Place	No. of Places	Population		Percent Change	Percent of Total Growth
		1966	1971		
Less than 1000	168	65,859	75,605	14.80	5.98
1000 - 2,499	36	54,767	60,382	10.25	3.44
2,500 - 4,999	28	92,434	108,637	17.53	9.94
5,000 - 9,999	4	30,408	33,478	10.10	1.88
10,000 - 29,999	3	63,162	67,271	6.51	2.52
30,000 - 99,999	1	37,186	41,217	10.84	2.47
100,000 and over	2	707,500	841,471	18.94	82.17
All Places	242	1,051,316	1,228,061	16.81	108.40





TABLE 54

NUMBER OF PLACES, POPULATION, PERCENT CHANGE,  
PERCENT OF TOTAL GROWTH BY SIZE OF PLACE  
IN 1971, ALBERTA, 1971-1976

Size of Place	No. of Places	Population		Percent Change	Percent of Total Growth
		1971	1976		
Less than 1000	158	60,078	68,148	13.43	3.86
1000 - 2,499	41	61,396	72,593	18.24	5.35
2,500 - 4,999	29	100,092	123,628	23.51	11.24
5,000 - 9,999	7	44,736	58,872	31.60	6.75
10,000 - 29,999	4	79,071	106,750	35.01	13.22
30,000 - 99,999	1	41,217	46,752	13.43	2.64
100,000 and over	2	841,471	931,278	10.67	42.90
All Places	242	1,228,061	1,408,021	14.65	85.96



TABLE 55

NUMBER OF PLACES, POPULATION, PERCENT CHANGE  
PERCENT OF TOTAL GROWTH BY SIZE OF PLACE  
IN 1976, ALBERTA, 1976-1979

Size of Place	No. of Places	Population		Percent Change	Percent of Total Growth
		1976	1979		
Less than 1000	149	57,863	66,805	15.45	4.56
1000 - 2,499	44	65,131	82,374	26.47	8.79
2,500 - 4,999	30	78,810	121,562	54.25	7.66
5,000 - 9,999	10	68,171	80,798	18.52	6.44
10,000 - 29,999	4	67,283	86,157	28.05	9.63
30,000 - 99,999	3	111,747	127,394	14.00	7.98
100,000 and over	2	931,278	1,022,175	9.76	46.36
All Places	242	1,380,283	1,587,265	15.00	91.41



had the largest percent changes in population. Places with less than 1000 people and places of more than 30,000 increased at slower rates. Places with 100,000 or more people accounted for the largest percent of the total growth (46.36%) in this period but remained well below the pre-1971 levels which saw 75 percent or more of the total growth going to these places.

The third and final hypothesis dealing with size of place (number 16, page 43) states that there are no significant differences in the population growth patterns of places in different size classifications in 1956 in each of the five year periods from 1956 to 1979.  $\chi^2$  (chi-square) tests were calculated on the populations of different size classifications in 1956 for each of the five year periods from 1956 to 1979. The tests were all significant at the .01 level. Table 56 gives the numerical population figures of places located in different size classification in 1956 for each of the five year intervals from 1956 to 1979. All size classifications increased in population in each of the five year intervals from 1956 to 1979. Table 57 shows that places located in different size categories in 1956 varied considerably in the percent change in population in each of the five year periods. The percent change in places over 100,000 consistently slowed down in each of the five year periods. Table 58 shows that the largest percent of the total growth in all periods occurred in the 100,000 and over classification.



TABLE 56

NUMBER OF PLACES, POPULATION BY SIZE OF PLACE  
IN 1956, ALBERTA 1956-1979

Size of Place	No. of Places	Population					
		1956	1961	1966	1971	1976	1979
Less than 100	185	64,109	81,144	92,935	105,583	127,687	152,710
1000 - 2,499	36	58,172	70,804	85,014	100,182	137,823	171,371
2,500 - 4,999	13	38,359	44,815	50,855	56,926	64,464	74,638
5,000 - 9,999	3	19,148	22,374	26,081	28,490	35,022	38,977
10,000 - 29,999	3	62,626	79,550	88,931	95,409	111,747	127,394
30,000 - 99,999	0	-	-	-	-	-	-
100,000 and over	2	437,708	597,123	707,500	841,471	931,278	1,022,175
Total	242	680,122	895,810	1,051,316	1,228,061	1,408,021	1,587,265





TABLE 57

NUMBER OF PLACES, PERCENT CHANGE BY SIZE OF PLACE IN 1956,  
ALBERTA, IN FIVE YEAR PERIODS 1956-1979

Size of Place	No. of Places	Percent Change				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 1000	185	26.57	14.53	13.61	20.94	19.60
1000 - 2,499	36	21.72	20.07	17.84	37.57	24.34
2,500 - 4,999	13	16.83	13.48	11.94	13.24	15.78
5,000 - 9,999	3	16.85	16.57	9.24	22.93	11.29
10,000 - 29,999	3	27.02	11.79	7.28	17.12	14.00
30,000 - 99,999	0	-	-	-	-	-
100,000 and over	2	36.42	18.49	18.94	10.67	9.76
Total	242	31.71	17.36	16.81	14.65	12.73



TABLE 58

NUMBER OF PLACES, PERCENT OF TOTAL GROWTH BY SIZE OF PLACE IN 1956  
ALBERTA IN FIVE YEAR PERIODS 1956-1979

Size of Place	No. of Places	Percent of Total Growth				
		1956-1961	1961-1966	1966-1971	1971-1976	1976-1979
Less than 1000	185	8.15	9.19	7.76	10.56	12.76
1000 - 2,499	36	6.04	11.08	9.30	17.98	17.11
2,500 - 4,999	13	3.09	4.71	3.72	3.60	5.19
5,000 - 9,999	3	1.54	2.89	1.48	3.12	2.02
10,000 - 29,999	3	8.10	7.31	3.97	7.80	7.98
30,000 - 99,999	0	-	-	-	-	-
100,000 and over	2	76.27	86.03	82.17	42.90	46.36
Total	242	103.20	121.20	108.40	85.96	91.41



However, the percent of the total growth going to the 100,000 and over classification declined sharply after 1971. In all periods places of less than 2,500 and more than 10,000 accounted for the largest percent of the total growth. Places between 2,500 and 9,999 accounted for a smaller percent of the total growth in all periods.



## CHAPTER V

### GENERAL FINDINGS AND IMPLICATIONS

#### GENERAL FINDINGS

The major purpose of this thesis was to examine the population growth patterns within Alberta between 1956 and 1979, and to determine if there was a reversal in the rural to urban migration trend. In order to achieve this objective; population growth in individual places was examined; population growth in rural and urban places was examined; and the relationship between population growth and four selected variables was examined.

General findings of this research indicate that population growth varied substantially among individual places throughout Alberta between 1956 and 1979. The population of Alberta increased considerably (81.97%) during this period, but the growth was unevenly distributed. While many places increased, some by more than 2000 percent, others remained relatively stable and still others declined in population. There is nothing good or bad about population growth itself. A judgement is possible only when the effects of change on the people involved can be measured. By alerting planners and policy makers, to the changes which are





occurring, it is hoped that the decision making process can be improved.

The decision making process may also be improved through a better understanding of some of the factors related to population growth. One factor with both practical and theoretical implication for the understanding of population growth is location. The general results of this study indicate a U-shaped relationship between growth and location, with places near to and remote from dominant urban places growing more than those in between. Although the U-shaped relationship was characteristic of the province as a whole, it did not hold true for each of the dominant urban places examined. All dominant urban places, except Grande Prairie, did however, demonstrate that the largest percent of the total growth was more likely to occur near by (within 120 km.) than at greater distances.

It was also found that regional location was an important variable related to population growth. Places located in urban regions of Alberta increased faster and accounted for a larger percent of the total growth than all other places combined between 1956 and 1979. Places located in resource regions were subject to moderate growth, while places located in agricultural regions were more likely to decline than places in other regions. A substantial change in these growth patterns, however, occurred after 1971. Post-1971 periods saw a turn around in the growth of agricultural regions, with positive total growth being



recorded for the first time since 1956. The post-1971 periods also saw resource regions increase more rapidly and account for a larger percent of the total growth than in any of the pre-1971 periods. Growth decelerated after 1971 in places located in urban regions of the province. While population growth was more evenly distributed in all regions after 1971, the urban regions, inspite of proportional losses, continued to dominate population growth in the province.

The results also indicate a relationship between central place status and population growth. Growth in central places decelerated in each succeeding period from 1956 to 1979. As well there has been a large decrease in the amount of the total growth occurring in central places since 1971. These trends may indicate; that central places have become less attractive places to live; that central places are losing some of their functions within the prairie community system; or that a new form of prairie community system is emerging. If the redistribution of population growth among regions and the changing trends among central places are considered together the evidence seems to point to a new form of regional community system. A system in which growth is more evenly distributed among regions and more equitably distributed within regions.

The results of the examination of the relationship between size of place and population growth are difficult to



evaluate because of the fact that the size of places is constantly changing. Population growth tended to vary considerably between different sized places between 1956 and 1979. Very large places (over 100,000) accounted for the largest percent of the total growth in all periods but suffered a substantial proportional loss in population growth after 1971. The percent change in population of very large places (over 100,000) also declined sharply after 1971. The general conclusion which seems to emerge from all of this is that while very large places (over 100,000) dominated population growth in Alberta between 1956 and 1979, there was a substantial shift in growth away from these places into smaller places after 1971.

Finally, the general findings of this research indicate that the long standing rural to urban migration trend has been halted and, on balance, even reversed. During the 1976-1979 period non-metropolitan areas of Alberta gained 11.39 percent in population compared to 10.36 percent for metropolitan areas. The turning point in rural and urban growth patterns occurred in 1971. In the 1966-1971 period non-metropolitan areas only increased by 2.89 percent. This figure, however, jumped to 11.91 percent in the 1971-1976 period. Metropolitan areas, on the other hand gained 18.83 percent between 1966 and 1971, but gained only 13.95 percent in the 1971 to 1976 period. For some reason Alberta's major



urban areas began to lose appeal while rural areas became more attractive. This general trend is evident even if the traditional census definition of rural and urban is used. For two periods prior to 1971 rural places declined, 15.01 percent between 1961 to 1966 and 2.42 percent between 1966 to 1971. After 1971, rural places began to grow, 8.57 percent between 1971-1976 and 5.55 percent between 1976 to 1979.

There can be but one answer to the question: Are human populations in rural places increasing? Absolutely! Are they growing faster or slower than populations in urban places? The answer to this question is difficult because it depends on the time frame and the definition of rural and urban which is used. In view of this the answer can be both affirmative and negative. Finally, all of the selected variables examined in this study revealed a relationship with population growth.

The overall conclusion of this research is that the population growth patterns of places located in the province of Alberta have altered substantially since 1971 when compared to previous periods. The turnaround, in population growth which became evident after 1971, is already having an impact. Rural places are increasing rather than declining. Non-metropolitan areas are expanding more rapidly than metropolitan. Agricultural and resource regions are gaining an increasing share of population growth. Central





places are becoming proportionally less important as population growth centers. Smaller and middle sized places are becoming more attractive as places to live. These changes point to a new paradigm on the future of population growth in Alberta, a paradigm in which much of what has been taken for granted may have to be modified.

It is, however, uncertain how long these new trends will continue. The changes may only be a temporary phenomenon and the proclamation of a rural renaissance may need to be reconsidered (Engles and Healy, 1979). The S curve of social change concept should not be overlooked when considering the post-1971 changes. As this concept suggests social change may occur rapidly while the situations are ripe and then stabilize for a considerable period until the basic situation changes again (Zimmerman and Moneo, 1971). Certainly one cannot foresee the dismantling of Edmonton and Calgary, yet, the data clearly indicates changing population growth patterns. Only time will tell how long these new population growth patterns will persist. What the population turnaround portends for the future of Alberta, its communities and its people is still uncertain but it is useful to speculate on what the implications of these new population growth patterns will be.

#### IMPLICATIONS

One obvious effect of the changes which have occurred since 1971 is that many places which were suffering



population declines before this date are now experiencing sizeable population increases. Much of the growth is due to migration to smaller communities in Alberta.

The consequences of a rapid influx of migrants to smaller communities can be quite dramatic from social and economic perspectives, particularly if the volume of migrants is high and their characteristics are quite dissimilar to the community's receiving populations (McVey, 1978, p. 15).

McVey (1978) conducted a study in which he examined the characteristics of migrants and non-migrants. Using 1971 Public Use Sample Tape census data, he found that there were significant differences, with migrants generally having "more education, higher status occupations, and smaller family size than the non-migrants of the receiving communities" (McVey, 1978, p. 13). The differences in demographic characteristics of migrants and non-migrants may have important implications for rural development and policy. The higher level of educational attainment by migrants may place increased pressure on the educational systems of the receiving communities. Such changes frequently lead to conflict. As well, the differences in migrant and non-migrant characteristics could have an effect on the cultural facilities and activities of the receiving community. Positive results of this may see the regeneration of rural libraries and the introduction of drama and music groups. In addition the in-migrants may fill the needs of recipient communities for such professionals as doctors and lawyers.



If the population change is large and rapid, "there may be consequences for the receiving communities in terms of migrant adjustment problems, employment and occupational competition, and unanticipated demands upon housing and social and community services" (McVey, 1978, p. 22). On the other hand if migration is small and occurs at an acceptable pace migrants to rural areas may be a rural development force moving towards an improved quality of life for all residents. In any case, the population changes occurring since 1971 are exceedingly and increasingly important in the development of decentralization policy in Alberta.

In addition to the implications the post-1971 changes have for decentralization policy, there are important implications for rural development policy. Prior to 1971 a major reorganization of the rural socio-economic system took place (Fox, 1969, Zimmerman and Moneo, 1971). This reorganization saw new ecological units based on the universal ownership of automobiles appear. These new units, which Fox referred to as Functional Economic Areas (F.E.A.'s), were miniature self-reliant economic units consisting of a dominant-urban center, smaller places and the open country within commuting distance of the dominant center. The post-1971 changes seem to indicate that these community systems are once again being restructured with the dominant places playing a diminished role. Rural development policies may well have to change to reflect these new developments in rural society as the differences between



rural and urban areas continue to diminish and new economic arrangements between communities emerge.

As well, farmers and the agricultural industry in general, must not overlook the changing population growth patterns. Although rural areas are growing after periods of decline, the number of farmers is continuing to decline. Growth of rural population and declining numbers of farm people means an increasing non-farm influence in rural areas. Such a scenario lends support to Dr. Warrack's hypothesis that "future agricultural policy will primarily be made by non-farm people" (1980, p. 4). This contention, while still open for debate must not be taken lightly. A confrontation situation between farm and non-farm people over agricultural policy would certainly be harmful. As new population settlement patterns emerge the agricultural industry must bring present their case so that the growing non-farm population can see the benefits of a healthy agricultural industry and lend support to the agricultural industry in achieving this goal.





# REFERENCES

- Alberta Bureau of Statistics, Alberta Treasury, Population - Alberta Census Divisions, Cities, Towns, Villages, Municipal Districts and Improvement Districts, 1956, 1961, 1966, 1971 and 1976. Edmonton: Author, 1977.
- Alberta Municipal Affairs, Municipal Inspection and Advisory Services, Population, 1979. Edmonton: Author, 1979.
- Alberta Tourism and Small Business, Province of Alberta, Official Road Map, 1980-81. Edmonton: Author, 1979.
- Barclay, G.W., Techniques of population analysis. New York: John Wiley and Sons Inc., 1966.
- Beale, C.L., Rural depopulation in the United States: Some demographic consequences of agricultural adjustments. Demography, 1964, 1, 264-272.
- Beale, C.L., Rural depopulation in the United States: Some demographic consequences of agricultural adjustments. Demography, 1969, 1, 264-272.
- Beale, C.L., Rural and non-metropolitan population trends of significance to national population policy. In Sara Mills Mazie (ed.), Commission on Population Growth and the American Future (Vol. V), Population, Distribution and Policy. Washington, D.C.: U.S. Government Printing Office, 1972 (University Microfilm No. 30601, 665-677).
- Beale, C.L., The Revival of Population Growth in Non-metropolitan America, (USDA Economic Research Service, ERS 605). Washington, D.C., 1975.
- Beale, C.L., People on the land. In T.R. Ford (ed.), Rural U.S.A. Persistence and Change. Ames: Iowa State University Press, 1978.
- Butler, J.E. and Fuguitt, G.V., Small-town population change and distance from larger towns: A replication of Hassinger's study. Rural Sociology, 1970, 35(3) 396-409.



- Berry, B.J.L. and Garrison, W.L., Recent development in central place theory. Papers and Proceedings of the Regional Science Association, 1958, 4, 107-121.
- Canadian Council on Rural Development. Rural Canada 1970: Prospects and Problems (Third Report and Review). Ottawa, 1969.
- De Jong, G.F., Residential preferences and migration. Demography, 1977, 14(2), 169-178.
- Engels, R.A. and Healy, M.K., Rural renaissance reconsidered. American Demographics, 1979, 1(5), 16-19.
- Flora, J. and Rodefeld, R.D., The nature, magnitude, and consequences of changes in agricultural technology. In R.D. Rodefeld, J. Flora, D. Voth, I. Fujimoto, and J. Converse (eds.), Change in Rural America Causes, Consequences, and Alternatives. St. Louis: The C.V. Mosby Company, 1978.
- Ford, T.R., Rural U.S.A. Persistence and Change. Ames: Iowa State University Press, 1978.
- Fox, K.A., The new synthesis of rural and urban society in the United States. Ch. 28 in Economic Problems of Agriculture in Industrial Societies, ed. by U. Pap and C. Nunn. International Econ. Assoc. Conference Proceedings, MacMillan, Toronto, 1969.
- Fuguitt, G.V., Growing and Declining Villages in Wisconsin, 1950-1960. Population Series ... Wisconsin's population (Report No. 8). Madison: University of Wisconsin Press, 1964.
- Fuguitt, G.V., County seat status as a factor in small town growth and decline. Social Forces, 1965, 44(2), 245-251.
- Fuguitt, G.V. and Zuiches, J.J., Residential preferences and population distribution. Demography, 1975, 12(3), 491-504.
- Hansen, H.M., The Future of Non-metropolitan America. Lexington: Lexington Books, 1973.
- Hansen, N.M., (ed.), Human Settlement Systems. Cambridge, Ballinger Publishing Company, 1978.



- Hassinger, E., The relationship of trade center population change to distance from larger centers in an agricultural area. Rural Sociology, 1957, 22, 131-136.
- ✓ Hodge, G., Do villages grow? - Some perspectives and predictions. Rural Sociology, 1966, 31(2), 183-196.
- Johnson, K.M. and Purdy, R.L., Recent non-metropolitan population change in fifty-year perspective. Demography, 1980, 17(1), 57-69.
- Lamont, G.R. and Proudfoot, V.B., Migration and changing settlement patterns in Alberta. In L.A. Kosinski and R.M. Prothero (eds.), People on the Move. London, Methuen and Co. Ltd., 1974.
- McVey, W.W., Migration and the smaller community. Canadian Studies in Population, 1978, 5, pp. 13-23.
- Murri, D. and Haigh, D., Growth of communities in the Edmonton urban fringe. Agriculture and Forestry Bulletin, 1980, 3(1), 22-25.
- Nelson, L., Rural Sociology (2nd ed.). New York: American Book Company, 1955.
- Parenteau, R., Is Canada going back to the land. (Statistics Canada Monograph No. 11 - GEO 79). Ottawa, 1980.
- Parkinson, A., Growth of small urban centers in Alberta, 1971-1976. Unpublished terminal project, University of Calgary, 1978.
- Ploch, L.A., The reversal in migration patterns - Some rural development consequences. Rural Sociology, 1978, 43(2), 293-303.
- Ratcliffe, S.C., Size as a factor in population changes of incorporated hamlets and villages, 1930-1940. Rural Sociology, 1942, 7, 318-328.
- Runyon, R.P. and Haber, A., Fundamentals of behavior statistics. (3rd. ed.). Don Mills: Addison-Wesley Publishing, 1976.
- Schwarzweiler, H.K., Migration and the changing rural scene. Rural Sociology, 1979, 44(1), 7-23.
- Statistics Canada, Dictionary of the 1971 census terms. (Catalogue No. 12-540). Ottawa: Author, 1972.



- Statistics Canada, Population, census metropolitan areas, (Catalogue No.'s 92-806; 92-809). Ottawa, Author, 1976.
- Tarver, J.D. and Beale, C.L., Population trends of southern non-metropolitan towns, 1950-1960. Rural Sociology, 1968, 33(1), 19-29.
- Tremblay, M.A. and W.J. Anderson (eds.). Rural Canada in Transition. Ottawa: Mutual Press Limited, 1966.
- Tucker, C.J., Changing patterns of migration between metropolitan and non-metropolitan areas in the United States: Recent evidence. Demography, 1976, 13(4), 435-443.
- Veeman, T.S. and Veeman, M.M., The changing organization, structure and control of Canadian agriculture. Proceedings of the Annual Meeting of the American Agriculture Economics Association, 1978.
- Warrack, A.A., Rural economic reorganization as induced by agricultural adjustments. Canadian Journal of Agricultural Economics, 1970, 18(3), 29-42.
- Warrack, A.A., Agriculture, food, and the urban mind. In S.N. Kulshreshtha and D. Grant Devine (eds.). Food Processing, Distribution and Retailing in the Eighties. Saskatoon: University of Saskatchewan, 1980.
- Whyte, D.R., Rural Canada in transition. In M.A. Tremblay and W.J. Anderson (eds.), Rural Canada in Transition. Ottawa, Agricultural Economics Research Council, 1966.
- Zimmerman, C.C. and Moneo, G.W., The Prairie Community System, Ottawa, Agricultural Research Council of Canada, 1971.





## APPENDIX A

POPULATION, PERCENT CHANGE, AND PERCENT OF TOTAL GROWTH

ALBERTA 1956-1979



Place	POPULATION					1979	% change 1956-1979	% Total Growth 1956-1979
	1956	1961	1966	1971	1976			
Cities:								
CALGARY	191147	276165	330575	403319	469917	530816	177.70	37.50
CAMROSE	5817	6939	8362	8673	10104	11210	92.71	.60
DRUMHELLER	2632	2931	3574	5446	6154	6204	135.71	39
EDMONTON	246561	320958	376925	438152	461361	491359	99.28	27.03
GRANDE PRAIRIE	6302	8352	11417	13079	17626	20427	224.14	1.56
LETHBRIDGE	29462	35454	37186	41217	46752	51668	75.37	2.45
LLOYDMINSTER	2506	2944	3767	4738	5818	7532	200.56	.55
MEDICINE HAT	20826	24484	25574	26518	32811	36356	74.57	1.71
RED DEER	12338	19612	26171	27674	32184	39370	219.10	2.98
ST ALBERT	1320	4059	9736	11800	24129	28718	2075.61	3.02
WETASKIWIN	4476	5300	6008	6267	6754	8592	91.96	.45
Towns:								
AIRDRIE	327	524	778	1089	1408	3879	1086.24	.39
ATHABASCA	1293	1487	1551	1765	1759	1878	45.24	.06
BARRHEAD	1610	2286	2592	2803	2944	3428	112.92	.20
BASHAW	597	614	697	757	773	870	45.73	.03
BASSANO	753	815	827	861	999	1148	52.46	.04
BEAVERLODGE	768	897	1083	1157	1332	1645	114.19	.10
BLACK DIAMOND	991	1043	858	945	1242	1355	36.73	.04
BONNYVILLE	1495	1736	2237	2587	2885	3699	147.42	.24
BOW ISLAND	1001	1122	1160	1159	1296	1398	39.66	.04
BROOKS	2320	2827	3354	3986	6339	7962	243.19	.62
CALMAR	730	700	600	799	872	934	27.95	.02
CANMORE	0	0	1445	1538	1927	3063	.00	.00
CARDSTON	2607	2801	2721	2685	3043	3043	16.72	.05
CARSTAIRS	449	665	761	884	1059	1508	235.86	.12
CASTOR	958	1025	1090	1166	1207	1207	25.99	.03
CLARESHOLM	2431	2143	2569	2935	3276	3425	40.89	.11
COALDALE	2327	2592	2541	2798	3654	4304	84.96	.22
COCHRANE	707	857	819	1046	1450	2309	226.59	.18
COLD LAKE	1097	1307	1289	1309	1317	1585	44.48	.05
CORONATION	784	864	811	877	1198	1406	79.34	.07
CROWSNEST PASS	7029	7083	6302	6738	7292	7340	4.42	.03
DAYSLAND	499	539	632	593	615	645	29.26	.02
DEVON	1429	1418	1283	1468	2786	3475	143.18	.23
DIDSBURY	1227	1254	1586	1821	2153	2753	124.37	.17
DRAYTON VALLEY	2588	3854	3352	3900	4303	4673	80.56	.23
ECKVILLE	456	580	716	660	774	814	78.51	.04



Place	POPULATION							
	1956	1961	1966	1971	1976	1979	% change 1956-1979	% Total Growth 1956-1979
EDSON	2560	3198	3788	3818	4038	5403	111.05	.31
ELK POINT	594	692	726	729	807	1012	70.37	.05
FAIRVIEW	1260	1506	1884	2109	2248	3027	140.24	.20
FALHER	802	741	843	918	1120	1162	44.89	.04
FORT MACLEOD	2103	2490	2709	2715	3067	3123	48.50	.11
FORT McMURRAY	1110	1186	2614	6847	15424	25802	2224.50	2.73
FORT SASKATCHEWAN	2582	2972	4152	5726	8304	10773	317.23	.90
FOX CREEK	0	0	0	1281	1625	1811	.00	.00
GIBBONS	0	192	230	551	1093	1507	.00	.00
GLEICHEN	581	426	411	367	339	339	-41.65	-.03
GRAND CENTRE	0	1493	1731	2088	2780	2829	.00	.00
GRANDE CACHE	0	0	0	2525	4116	4423	.00	.00
GRANUM	322	290	295	324	413	424	31.68	.01
GRIMSHAW	904	1095	1376	1714	1665	1950	115.71	.12
HANNA	2327	2645	2633	2545	2627	2756	18.44	.05
HARDISTY	628	582	597	594	534	671	6.85	.00
HIGH LEVEL	0	0	708	1614	1562	2043	.00	.00
HIGH PRAIRIE	1743	1756	2241	2354	2281	2281	30.87	.06
HIGH RIVER	2102	2276	2239	2676	3598	4018	91.15	.21
HINTON	0	3529	4307	4911	6731	7412	.00	.00
INNISFAIL	1883	2270	2531	2474	2897	4350	131.01	.27
IRVINE	232	240	209	194	221	336	44.83	.01
KILLAM	524	552	866	851	887	940	79.39	.05
LAC LA BICHE	967	1314	1490	1791	1954	1991	105.89	.11
LACOMBE	2747	3029	3035	3436	3888	4925	79.29	.24
LAMONT	632	705	835	899	997	1247	97.31	.07
LEDUC	2008	2356	2856	4000	8576	11016	448.61	.99
MAGRATH	1382	1338	1220	1215	1315	1464	5.93	.01
MANNING	726	896	1179	1071	1050	1140	57.02	.05
MAYERTHORPE	563	663	916	1036	1018	1360	141.56	.09
MCLENNAN	1092	1078	1104	1090	1133	1212	10.99	.01
MILK RIVER	642	801	861	775	814	814	26.79	.02
MORINVILLE	957	935	995	1475	2097	3398	255.07	.27
MUNDARE	650	603	564	511	555	666	2.46	.00
NANTON	1047	1054	940	991	1152	1413	34.96	.04
OKOTOKS	764	1043	922	1247	1795	2616	242.41	.20
OLDS	1980	2433	2999	3376	3658	4299	117.12	.26
OVEN	562	780	846	929	962	1008	79.36	.05
PEACE RIVER	2034	2543	4087	5039	4840	5692	179.84	.40
PICTURE BUTTE	881	978	1013	1008	1164	1329	50.85	.05
PINCHER CREEK	1729	2961	2882	3227	3448	3825	121.23	.23
PONOKA	3387	3938	4421	4414	4636	4845	43.05	.16



Place	POPULATION						1979	% change 1956-1979	% Total Growth 1956-1979
	1956	1961	1966	1971	1976	1979			
PROVOST	878	1022	1328	1489	1532	1478	68.34	.07	
RAINBOW LAKE	0	0	0	355	434	806	.00	.00	
RAYMOND	2399	2362	1950	2156	2290	2655	10.67	.03	
REDCLIFF	2001	2221	2141	2255	3006	3473	73.56	.16	
REDWATER	1065	1135	1041	1287	1493	1767	65.92	.08	
RIMBEY	980	1266	1502	1450	1452	1687	72.14	.08	
ROCKY MOUNTAIN HOUSE	1285	2360	2446	2988	3432	4010	212.06	.30	
SEDEGWICK	608	655	760	730	825	847	39.31	.03	
SLAVE LAKE	0	468	1716	2052	3561	3821	.00	.00	
SMOKY LAKE	563	626	871	881	925	1121	99.11	.06	
SPIRIT RIVER	743	890	1034	1091	1020	1020	37.28	.03	
SPRUCE GROVE	309	465	598	3029	6907	8411	2622.01	.89	
ST PAUL	2229	2823	3543	4161	4337	4710	111.31	.27	
STAVELY	338	349	292	351	432	506	49.70	.02	
STETTLER	3359	3638	3988	4168	4182	4696	39.80	.15	
STONY PLAIN	1098	1311	1397	1770	2717	3884	253.73	.31	
STRATHMORE	727	924	994	1148	1561	2479	240.99	.19	
SUNDRE	923	853	831	933	1099	1546	67.50	.07	
SWAN HILLS	0	643	1414	1376	2012	2553	.00	.00	
SYLVAN LAKE	1114	1381	1332	1597	1837	3345	200.27	.25	
TABER	3688	3951	4584	4765	5296	5556	50.65	.21	
THREE HILLS	1095	1491	1452	1354	1564	1831	67.21	.08	
TOFIELD	800	905	952	924	1120	1369	71.13	.06	
TROCHU	680	671	780	739	752	852	25.29	.02	
TURNER VALLEY	704	702	625	766	1132	1172	66.48	.05	
TWO HILLS	713	826	1056	979	943	1326	85.97	.07	
VALLEYVIEW	973	1077	1827	1708	1716	1716	76.36	.08	
VAUXHALL	713	942	934	1016	954	1075	50.77	.04	
VEGREVILLE	2574	2908	3598	3691	4158	4281	66.32	.19	
VERMILION	2196	2449	2685	2915	3182	3455	57.33	.14	
VIKING	897	1043	1146	1178	1217	1227	36.79	.04	
VULCAN	1204	1310	1505	1384	1442	1514	25.75	.03	
WAINWRIGHT	2653	3351	3867	3872	3890	4115	55.11	.16	
WESTLOCK	1136	1838	2685	3246	3721	3824	236.62	.30	
WHITECOURT	0	1054	2279	3202	3878	4758	.00	.00	
Villages:									
ACME	292	328	335	300	351	411	40.75	.01	
ALIX	517	631	636	565	669	902	74.47	.04	
ALLIANCE	313	291	291	230	228	228	-27.16	-.01	
AMISK	151	127	134	134	133	168	11.26	.00	





Place	POPULATION					1979	% Change 1956-1979	% Total Growth 1956-1979
	1956	1961	1966	1971	1976			
ANDREW	602	601	525	466	486	565	-6.15	.00
ARROWWOOD	240	195	174	166	145	155	-35.42	-.01
BARONS	352	345	270	237	283	293	-19.60	-.01
BAWL	287	203	220	182	207	288	3.83	.00
BEISEKER	321	360	404	414	486	500	55.76	.02
BENTLEY	536	588	637	621	730	828	54.48	.03
BERWYN	342	347	430	474	433	521	52.34	.02
BIG VALLEY	354	461	378	306	344	344	-2.82	.00
BITTERN LAKE	45	76	80	100	91	140	211.11	.01
BLACKFALDS	340	477	729	904	1024	1325	289.71	.11
BLACKIE	198	184	156	168	223	329	66.16	.01
BON ACCORD	O	O	147	332	882	1156	.00	.00
BOTHA	102	112	134	99	133	160	56.86	.01
BOWDEN	296	437	610	560	661	904	205.41	.07
BOYLE	304	346	437	460	576	612	101.32	.03
BRETEN	O	428	447	352	424	531	.00	.00
BRUDERHEIM	290	299	290	350	484	751	158.97	.05
BURDETT	225	229	207	206	214	223	-.89	.00
CARBON	354	371	374	343	435	453	27.97	.01
CARMANGAY	299	297	246	230	263	280	-6.35	.00
CAROLINE	296	321	294	339	385	380	28.38	.01
CAYLEY	146	146	133	122	156	158	8.22	.00
CEREAL	154	195	191	220	231	231	50.00	.01
CHAMPION	402	419	357	335	300	371	-7.71	.00
CHAUVIN	353	395	362	349	296	331	-6.23	.00
CHIPMAN	192	174	183	181	296	324	68.75	.01
CLIVE	249	251	238	247	254	318	27.71	.01
CLUNY	197	174	171	86	95	95	-51.78	-.01
CLYDE	221	259	256	233	312	400	81.00	.02
CONSORT	434	557	594	659	609	609	40.32	.02
COUTTS	O	469	427	407	387	407	.00	.00
COWLEY	92	127	163	201	284	333	261.96	.03
CREMONA	192	221	191	186	227	243	26.56	.01
CROSSFIELD	459	593	582	638	777	955	108.06	.05
CZAR	153	196	222	196	184	190	24.18	.00
DELBURNE	429	450	391	383	417	519	20.98	.01
DELIA	282	287	274	241	232	232	-17.73	-.01
DERWENT	289	281	261	203	156	147	-49.13	-.02
DEWBERRY	O	179	198	160	161	164	.00	.00
DONALDA	256	289	271	232	198	252	-1.56	.00
DONNELLY	265	289	249	274	278	340	28.30	.01
DUCHESS	177	218	233	228	343	420	137.29	.03



Place	POPULATION					1979	% change 1956-1979	% Total Growth 1956-1979
	1956	1961	1966	1971	1976			
EAGLESHAM	O	O	O	218	229	229	.00	.00
EDBERG	167	179	167	145	140	140	-16.17	.00
EDGERTON	292	295	345	296	324	363	24.32	.01
ELNORA	177	214	191	213	211	239	35.03	.01
EMPRESS	480	405	360	266	238	238	-50.42	-.03
ENTWISTLE	354	411	345	353	380	451	27.40	.01
EVANSBURG	358	452	472	528	671	744	107.82	.04
FERINTOSH	195	174	156	127	135	166	-14.87	.00
FOREMOST	456	561	554	568	534	534	17.11	.01
FORESTBURG	552	677	669	669	808	901	63.22	.04
FORT ASSINIBOINE	O	216	187	173	185	182	.00	.00
GADSBY	145	98	84	47	43	48	-66.90	-.01
GALAHAD	215	231	174	179	184	184	-14.42	.00
GIROUXVILLE	300	318	305	347	303	315	5.00	.00
GLENWOOD	314	315	350	354	370	431	37.26	.01
GLENWOOD	O	274	194	200	199	230	.00	.00
GRASSY LAKE	282	274	226	196	151	170	-39.72	-.01
HAIRY HILL	183	173	136	99	96	96	-47.54	-.01
HALKIRK	209	172	177	136	152	152	-27.27	-.01
HAY LAKES	193	233	196	211	236	287	48.70	.01
HEISLER	O	214	214	199	200	215	.00	.00
HILLSPRING	O	243	190	213	175	192	.00	.00
HINES CREEK	360	398	418	438	503	503	39.72	.02
HOLDEN	544	556	503	448	393	393	-27.76	-.02
HUGHENDEN	212	294	274	267	236	267	25.94	.01
HUSSAR	168	213	235	170	177	191	13.69	.00
HYTHE	481	449	445	487	460	504	4.78	.00
INNISFREE	318	291	314	252	265	267	-16.04	-.01
IRMA	421	425	430	423	428	486	15.44	.01
IRRICANA	158	167	104	139	264	395	150.00	.03
KINUSO	306	323	376	267	305	305	-.33	.00
KITSCOTY	283	326	364	320	391	501	77.03	.02
LAVOY	127	131	118	114	115	115	-9.45	.00
LEGAL	457	524	572	563	874	1032	125.82	.06
LINDEN	O	O	210	226	296	393	.00	.00
LOMOND	189	244	215	165	182	193	2.12	.00
LONGVIEW	O	O	173	189	198	246	.00	.00
LOUGHEED	201	217	252	217	213	227	12.94	.00
MANNVILLE	599	632	683	646	681	681	13.69	.01
MARWAYNE	337	379	351	351	376	450	33.53	.01
MILLET	427	403	418	456	762	815	90.87	.04
MILO	167	167	154	117	89	100	-40.12	-.01



Place	POPULATION					1976	1979	% change 1956-1979	% Total Growth 1956-1979
	1956	1961	1966	1971	1976				
MINBURN	150	164	143	106	125	125	125	-16.67	.00
MIRROR	591	577	433	365	335	452	452	-23.52	-.02
MORRIN	267	316	272	197	230	230	230	-13.86	.00
MUNSON	82	82	39	54	96	96	96	17.07	.00
MYRMAN	440	441	460	403	396	411	411	-6.59	.00
NAMPA	0	271	288	283	286	352	352	.00	.00
NEW NORWAY	273	263	220	200	276	261	261	-4.40	.00
NEW SAREPTA	0	184	173	202	237	282	282	.00	.00
NOBLEFORD	263	309	345	401	417	540	540	105.32	.03
ONWAY	190	302	375	496	444	500	500	163.16	.03
PARADISE VALLEY	0	0	174	144	144	161	161	.00	.00
PENHOLD	213	319	370	452	773	983	983	361.50	.09
PLAMONDON	0	0	195	189	228	236	236	.00	.00
RADWAY	203	183	158	170	169	218	218	7.39	.00
ROCKYFORD	226	288	281	286	276	321	321	42.04	.01
ROSALIND	0	0	222	203	187	186	186	.00	.00
ROSEMARY	158	210	221	208	273	273	273	72.78	.01
RUMSEY	104	123	108	95	85	102	102	-1.92	.00
RYCROFT	424	500	539	461	533	538	538	26.89	.01
RYLEY	495	469	438	428	432	551	551	11.31	.01
SANGUDO	331	325	314	360	409	434	434	31.12	.01
SEXSMITH	345	531	491	559	770	1064	1064	208.41	.08
STANDARD	230	266	294	267	305	364	364	58.26	.01
STIRLING	430	468	390	436	543	664	664	54.42	.03
STROME	306	311	239	226	227	273	273	-10.78	.00
THORHILD	288	312	430	509	533	539	539	87.15	.03
THORSBY	411	491	583	595	657	788	788	91.73	.04
TILLEY	240	257	250	270	329	337	337	40.42	.01
TORRINGTON	0	0	130	118	186	247	247	.00	.00
VETERAN	241	239	278	267	279	301	301	24.90	.01
VILNA	374	400	348	303	348	372	372	-.53	.00
WANHAM	0	251	235	268	225	233	233	.00	.00
WARBURG	257	285	407	464	408	485	485	88.72	.03
WARNER	450	472	446	408	434	434	434	-3.56	.00
WARSPITE	159	153	119	110	92	92	92	-42.14	-.01
WASKATENAU	289	305	274	233	271	288	288	-.35	.00
WEMBLEY	272	303	299	348	507	835	835	206.99	.06
WILDWOOD	547	479	403	386	360	403	403	-16.09	-.01
WILLINGDON	431	429	419	325	308	337	337	-21.81	-.01
YOUNGSTOWN	305	321	357	305	272	308	308	.98	.00



Place	POPULATION						% change 1956-1979	% Total Growth 1956-1979
	1956	1961	1966	1971	1976	1979		
Counties								
GRANDE PRAIRIE CO #1 VULCAN CO #2 PONOKA CO #3 NEWELL CO #4 WARNER CO #5 STETTLER CO #6 THORHILD CO #7 FORTY MILE CO #8 BEAVER CO #9 WETASKIWIN CO #10 BARRHEAD CO #11 ATHABASCA CO #12 SMOKY LAKE CO #13 LACOMBE CO #14 WHEATLAND CO #16 MOUNTAIN VIEW CO #17 PAINTEARTH CO #18 ST. PAUL CO #19 STRATHCONA CO #20 TWO HILLS CO #21 CAMROSE CO #22 RED DEER CO #23 VERMILION RIVER CO #24 LEDUC CO #25 LETHBRIDGE CO #26 MINIBURN CO #27 LAC STE ANNE CO #28 FLAGSTAFF CO #29 LAMONT CO #30 PARKLAND CO #31	8899	8803	8697	8723	9147	9147	2.79	.03
	5087	5018	4330	3908	3869	3873	-23.86	-1.13
	8611	8688	8392	7142	6903	7223	-16.12	-1.15
	5943	6038	5898	5616	5828	5977	.57	.00
	5157	4991	4386	3795	3574	3574	-30.70	-1.17
	6061	5996	5642	5000	4923	4968	-18.03	-1.12
	5596	5096	4324	3878	3752	3324	-40.60	-2.25
	4224	4716	4104	3728	3518	3518	-16.71	-1.08
	6883	6476	6009	5238	4946	4950	-28.08	-2.21
	9620	8870	8582	8165	8434	8670	-9.88	-1.10
	5944	5759	5467	5029	5148	5148	-13.39	-1.09
	7367	6792	6147	5611	5406	5406	-26.62	-2.22
	5517	4913	4028	3439	3154	3154	-42.83	-2.26
	8383	8765	8415	8161	8499	8532	1.78	.02
	5582	5570	5062	5012	4944	4944	-11.43	-1.07
	9273	9348	8656	8434	8665	8695	-6.23	-1.06
	3515	3278	3227	2803	2603	2603	-25.95	-1.10
	7979	7421	6710	5845	5443	5716	-28.36	-2.25
	8873	12075	16185	25735	42278	46057	419.07	4.11
	7114	6205	5528	4360	3621	3621	-49.10	-1.39
	9626	9041	8285	7653	7344	7362	-23.52	-2.25
	12830	13477	12866	12775	13395	13669	6.54	.09
	9557	8862	8380	6962	6646	6967	-27.10	-2.29
	11499	10649	10301	10561	11832	12532	8.98	.11
11624	11184	9506	9648	10262	10044	-13.59	-1.17	
6742	6181	5591	4913	4580	4609	-31.64	-2.24	
7019	7316	6913	6827	7385	7455	6.21	.05	
6806	6355	5977	5263	4653	4653	-31.63	-2.24	
7700	6754	5872	4931	4615	4615	-40.06	-3.34	
11932	12290	11280	12264	18153	23398	96.09	1.27	
Municipal Districts								
CARDSTON M D #6	5398	4905	4259	4130	4248	4443	-17.69	-1.11
PINCHER CREEK M D #9	3109	3240	2739	2751	2879	2879	-7.40	-1.03
TABER M D #14	6730	7349	6871	6192	5909	6134	-8.86	-1.07
WILLOW CREEK M D #26	6344	4863	4317	4220	4422	5223	-17.67	-1.12
FOOTHILLS M D #31	7902	7896	6455	7065	8685	9069	14.77	.13
ACADIA M D #34	914	965	896	691	651	651	-28.77	-1.03
ROCKYVIEW M D #44	17438	10748	8522	10969	15469	16863	-3.30	-1.06
STARLAND M D #47	2969	3014	2633	2275	2193	2223	-25.13	-1.08





Place	POPULATION					1979	% change 1956-1979	% Total Growth 1956-1979
	1956	1961	1966	1971	1976			
KNEEHILL M D #48	7055	7008	6290	5890	5830	5957	-15.56	- .12
PROVOST M D #52	3621	3328	2944	2859	2653	2655	-26.68	- .11
WAINWRIGHT M D #61	4481	4847	4454	3864	3775	3839	-14.33	- .07
BONNVILLE M D #87	10058	10209	10980	10935	9844	9865	-1.92	- .02
STURGEON M D #90	13865	17837	15926	10976	12861	14995	8.15	.12
WESTLOCK M D #92	8731	7864	7378	6818	6612	6720	-23.03	- .22
SMOKY RIVER M D #130	3955	4094	3984	3453	2948	2990	-24.40	- .11
SPIRIT RIVER M D #133	1413	1318	1243	1052	857	857	-39.35	- .06
PEACE M D #135	1732	2053	2223	1624	1583	1583	-8.60	- .02
FAIRVIEW M D #136	1885	1917	1745	1615	1755	1799	-4.56	- .01
<b>Improvement Districts</b>								
I D #1	4668	4781	4264	4037	4918	5390	15.47	.08
WATERTON NAT PARK	277	344	266	259	194	194	-29.96	- .01
I D #6	100	133	132	133	110	150	50.00	.01
I D #7	5502	4370	3403	1859	1266	1266	-76.99	- .47
I D #8	2888	3231	1728	1859	1690	1246	-53.65	- .16
BANFF NATIONAL PARK	3069	4101	3381	3532	3849	3849	25.42	.09
I D #10	5861	6695	6421	7280	7905	7905	34.87	.23
JASPER NATIONAL PARK	2322	2902	2791	3084	3602	3602	55.12	.14
ELK ISLAND NAT PARK	56	69	63	46	33	33	-41.07	.00
I D #14	10688	8219	7875	7493	7586	7586	-29.02	- .34
I D #15	2474	2987	2086	1954	2214	2214	-10.51	- .03
I D #16	3014	3484	3563	4215	4561	4561	51.33	.17
I D #17	12958	13062	11883	11278	11145	11209	-13.50	- .19
I D #18	8529	9102	9199	8816	8511	8669	1.64	.02
I D #19	3133	2646	2595	2155	1816	1816	-42.04	- .15
I D #20	2633	2505	2792	2730	2667	2667	1.29	.00
I D #21	2635	2772	3379	3160	2648	2648	.49	.00
I D #22	3489	3194	3251	3209	3132	3132	-10.23	- .04
I D #23	3256	4276	4962	4188	5765	5857	79.88	.29
WOOD BUFFALO NT PARK	143	86	231	186	199	199	39.16	.01
<b>Special Areas</b>								
S A #2	3687	3805	3288	2905	2521	2521	-31.62	- .13
S A #3	5190	5108	4781	4204	3740	3740	-27.94	- .16



## APPENDIX B

POPULATION - ALBERTA BY CENSUS DIVISION



Place	1956	1961	1966	POPULATION			
				1971	1976	1979	
CENSUS DIVISION # 1	31632	36133	36072	36410	43512	47755	
I D #1:	25726	29505	30047	30749	37950	42082	
Cities:							
Medicine Hat	20826	24484	25574	26518	32811	36356	
Towns:							
Irvine	232	240	209	194	221	336	
Residual:	4668	4781	4264	4037	4918	5390	
Forty Mile, Cty 8	5906	6628	6025	5661	5562	5673	
Towns:							
Bow Island	1001	1122	1160	1159	1296	1398	
Villages:							
Burdett	225	229	207	206	214	223	
Foremost	456	561	554	568	534	534	
Residual:	4224	4716	4104	3728	3518	3518	
CENSUS DIVISION # 2	74991	83306	82719	86624	96995	105768	
M D 14 Taber	11413	12516	12615	12169	12310	12935	
Towns:							
Taber	3688	3951	4584	4765	5296	5556	
Vauxhall	713	942	934	1016	954	1075	
Villages:							
Grassy Lake	282	274	226	196	151	170	
Residual:	6730	7349	6871	6192	5909	6134	
Newell County # 4	9591	10365	10783	11169	14111	16117	
Towns:							
Bassano	753	815	827	861	999	1148	
Brooks	2320	2827	3354	3986	6339	7962	
Villages:							
Duchess	177	218	233	228	343	420	
Rosemary	158	210	221	208	273	273	
Tilley	240	257	250	270	329	337	
Residual:	5943	6038	5898	5616	5828	5977	



Place	POPULATION					
	1956	1961	1966	1971	1976	1979
Warner County # 5	9078	9563	8460	7977	8042	8548
Towns:						
Milk River	642	801	861	775	814	814
Raymond	2399	2362	1950	2156	2290	2655
Villages:						
Coutts	0	469	427	407	387	407
Stirling	430	468	390	436	543	664
Warner	450	472	446	408	434	434
Residual:	5157	4991	4386	3795	3574	3574
Lethbridge Cty #26	44909	50862	50861	55309	62532	68168
Cities:						
Lethbridge	29462	35454	37186	41217	46752	51668
Towns:						
Coaldale	2327	2592	2541	2798	3654	4304
Picture Butte	881	978	1013	1008	1164	1329
Villages:						
Barons	352	345	270	237	283	283
Nobleford	263	309	345	401	417	540
Residual:	11624	11184	9506	9648	10262	10044
CENSUS DIVISION # 3	26902	27078	25490	26158	28353	30523
M D 6 Cardston	9387	9561	8584	8443	8980	9372
Towns:						
Cardston	2607	2801	2721	2685	3043	3043
Magrath	1382	1338	1220	1215	1315	1464
Villages:						
Glenwood	0	274	194	200	199	230
Hill Spring	0	243	190	213	175	192
Residual:	5398	4905	4259	4130	4248	4443
M D 9 Pincher Creek	4930	6328	5784	6179	6611	7037
Towns:						
Pincher Creek	1729	2961	2882	3227	3448	3825
Villages:						
Crowley	92	127	163	201	284	333
Residual:	3109	3240	2739	2751	2879	2879





Place	POPULATION					
	1956	1961	1966	1971	1976	1979
M D 26 Willow Creek	12585	11189	11122	11536	12762	14114
Towns:						
Clareholm	2431	2143	2569	2935	3276	3425
Fort MacLeod	2103	2490	2709	2715	3067	3123
Granum	322	290	295	324	413	424
Nanton	1047	1054	940	991	1152	1413
Stavelly	338	349	292	351	432	506
Residual:	6344	4863	4317	4220	4422	5223
CENSUS DIVISION # 4	14294	15020	14224	12991	12130	12363
M D 34 Acadia	1394	1370	1256	957	889	889
Villages:						
Empress	480	405	360	266	238	238
Residual:	914	965	896	691	651	651
Special Area # 2	6014	6450	5921	5450	5148	5277
Towns:						
Hanna	2327	2645	2633	2545	2627	2756
Residual:	3687	3805	3288	2905	2521	2521
Special Area # 3	6886	7200	7047	6584	6093	6197
Towns:						
Oyen	562	780	846	929	962	1008
Villages:						
Cereal	154	195	191	220	231	231
Consort	434	557	594	659	609	609
Veteran	241	239	278	267	279	301
Youngstown	305	321	357	305	272	308
Residual:	5190	5108	4781	4204	3740	3740
CENSUS DIVISION # 5	36613	36503	34273	32778	33657	35716
I D # 7	8134	7301	6977	7305	7420	7470
Cities:						
Drumheller	2632	2931	3574	5446	6154	6204
Residual:	5502	4370	3403	1859	1266	1266



Place	POPULATION					
	1956	1961	1966	1971	1976	1979
M D 47 Starland	3704	3822	3326	2862	2836	2883
Villages:						
Dellia	282	287	274	241	232	232
Morrin	267	316	272	197	230	230
Munson	82	82	39	54	96	96
Runsey	104	123	108	95	85	102
Residual:	2969	3014	2633	2275	2193	2222
M D 48 Kneehill	9476	9869	9571	8970	9414	10144
Towns:						
Three Hills	1095	1491	1452	1354	1564	1831
Trochu	680	671	780	739	752	852
Villages:						
Acme	292	328	335	300	351	411
Carbon	354	371	374	343	435	453
Lindon	0	0	210	226	296	393
Torrington	0	0	130	118	186	247
Residual:	7055	7008	6290	5890	5830	5957
Vulcan County # 2	7588	7650	6981	6305	6290	6486
Towns:						
Vulcan	1204	1310	1505	1384	1442	1514
Villages:						
Arrowwood	240	195	174	166	145	155
Charmangay	299	297	246	230	263	280
Champion	402	419	357	335	300	371
Lomond	189	244	215	165	182	193
Mito	167	167	154	117	89	100
Residual:	5087	5018	4330	3908	3869	3873
Wheatland Cty # 16	7711	7861	7418	7336	7697	8733
Towns:						
Gleichen	581	426	411	367	339	339
Strathmore	727	924	994	1148	1561	2479
Villages:						
Cluny	197	174	171	86	95	95
Hussar	168	213	235	170	177	191
Rockyford	226	288	281	286	276	321
Standard	230	266	264	267	305	364
Residual:	5582	5570	5062	5012	4944	4944



Place	POPULATION						
	1956	1961	1966	1971	1976	1979	
CENSUS DIVISION # 6	235306	315202	366130	443750	520063	589706	
Cities:							
Calgary	191147	276165	330575	403319	469917	530816	
M D 31 Foothills	10705	11014	9322	10502	13431	14945	
Towns:							
Black Diamond	991	1043	858	945	1242	1355	
High River	0	0	0	0	0	0	
Okotoks	764	1043	922	1247	1795	2616	
Turner Valley	704	702	625	766	1132	1172	
Villages:							
Blackie	198	184	156	168	223	329	
Cayley	146	146	133	122	156	158	
Longview	0	0	173	189	198	246	
Residual:	7902	7896	6455	7065	8685	9069	
M D #44 Rockview	19410	13249	11209	14295	19854	24901	
Towns:							
Airdrie	327	524	778	1089	1408	3879	
Cochrane	707	857	819	1046	1450	2309	
Villages:							
Beiseker	321	360	404	414	486	500	
Crossfield	459	593	582	638	777	955	
Irricana	158	167	104	139	264	395	
Residual:	17438	10748	8522	10969	15469	16863	
Mountain View # 17	14044	14774	15024	15634	16861	19044	
Towns:							
Carstairs	449	665	761	884	1059	1508	
Didsbury	1227	1254	1586	1821	2153	2753	
Olids	1980	2433	2999	3376	3658	4299	
Sundre	923	853	831	933	1099	1546	
Villages:							
Cremona	192	221	191	186	227	243	
Residual:	9273	9348	8656	8434	8665	8695	



Place	1958	1961	1968	1971	1976	1979
CENSUS DIVISION # 7						
M D 52 Provost	39610	40623	40619	38135	37608	39297
	5015	4967	4902	4945	4738	4758
Towns:						
Provost	878	1022	1328	1489	1532	1478
Villages:						
Amisk	151	127	134	134	133	168
Czar	153	196	222	196	184	190
Hughenden	212	294	274	267	236	267
Residual:	3621	3328	2944	2859	2653	2655
M D 61 Wainwright	8200	9313	9458	8804	8713	9134
Towns:						
Wainwright	2653	3351	3867	3872	3890	4115
Villages:						
Chauvin	353	395	362	349	296	331
Edgerton	292	295	345	296	324	363
Irma	421	425	430	423	428	486
Residual:	4481	4847	4454	3864	3775	3839
Stettler County #6	10277	10594	10497	9852	9823	10468
Towns:						
Stettler	3359	3638	3988	4168	4182	4696
Villages:						
Big Valley	354	461	378	306	344	344
Botha	102	112	134	99	133	160
Donalda	256	289	271	232	198	252
Gadsby	145	98	84	47	43	48
Residual:	6061	5996	5642	5000	4923	4968
Paintearth Cty #18	5466	5339	5305	4982	5160	5368
Towns:						
Castor	958	1025	1090	1166	1207	1207
Coronation	784	864	811	877	1198	1406
Villages:						
Haikirk	209	172	177	136	152	152
Residual:	3515	3278	3227	2803	2603	2603





Place	POPULATION				
	1956	1961	1966	1971	1976
Flagstaff Cty #29	10652	10410	10457	9552	9174
Towns:					
Daysland	499	539	632	593	615
Hardisty	628	582	597	594	534
Killiam	524	552	866	851	887
Sedgewick	608	655	760	730	825
Villages:					
Alliance	313	291	291	230	228
Forestburg	552	677	669	669	808
Galahad	215	231	174	179	184
Lougheed	201	217	252	217	213
Strome	306	311	239	226	227
Residual:	6806	6355	5977	5263	4653
CENSUS DIVISION # 8	63519	76326	82877	84680	93261
I D 10	7442	9376	9161	10587	11722
Towns:					
Rocky Mtn House	1285	2360	2446	2968	3432
Villages:					
Caroline	296	321	294	339	385
Residual:	5861	6695	6421	7280	7905
Ponoka County # 3	12978	13892	14315	13006	12991
Towns:					
Ponoka	3387	3938	4421	4414	4636
Rimby	980	1266	1502	1450	1452
Residual:	8611	8688	8392	7142	6903
Lacombe County #14	13819	14898	14839	14959	16173
Towns:					
Eckville	456	580	716	660	774
Lacombe	2747	3029	3035	3436	3888
Villages:					
Alix	517	631	636	565	669
Bentley	536	588	637	621	730
Blackfalds	340	477	729	904	1024
Clive	249	251	238	247	254
Mirror	591	577	433	365	335
Residual:	8383	8765	8415	8161	8499
					8532



Place	POPULATION				
	1956	1961	1966	1971	1976
Red Deer Cty #23	29280	38160	44562	46128	52375
63379					
Cities:					
Red Deer	12338	19612	26171	27674	32184
Towns:					
Innisfail	1883	2270	2531	2474	2897
Sylvan Lake	1114	1381	1332	1597	1837
Villages:					
Bowden	296	437	610	560	661
Delburne	429	450	391	383	417
Elmira	177	214	191	211	239
Penhold	213	319	370	452	773
Residual:	12830	13477	12966	12775	13395
13669					
CENSUS DIVISION # 9	15485	17794	16045	17123	18664
19444					
I D # 6	7129	7216	6434	6871	7402
7490					
Towns:					
Crowsnest Pass	7029	7083	6302	6738	7292
Residual:	100	133	132	133	110
150					
I D # 8	2688	3231	3173	3397	3617
4309					
Towns:					
Canmore	0	0	1445	1538	1927
Residual:	2688	3231	1728	1859	1690
1246					
Banff Nat Park	3069	4101	3381	3532	3849
Jasper Nat Park	2322	2902	2791	3064	3602
3602					
Waterton Nat Park	277	344	266	259	194
194					
CENSUS DIVISION # 10	71500	70177	70211	65532	67229
72857					
Beaver County # 9	9619	9449	9048	8216	8108
8490					
Towns:					
Torfield	800	905	952	924	1120
Viking	897	1043	1146	1178	1217
Villages:					
Holsten	544	556	503	448	393
Ryley	495	469	438	428	432
551					
Residual:	6883	6476	6009	5238	4946
4950					



Place	POPULATION				
	1956	1961	1966	1971	1976
Two Hills Cty #21	9170	8355	7860	6369	5520
5938					
Towns:					
Two Hills	713	826	1056	979	943
1326					
Villages:					
Derwent	289	281	261	203	156
147					
Hairy Hill	183	173	136	99	96
96					
Myrnam	440	441	460	403	396
411					
Willingdon	431	429	419	325	308
337					
Residual:	7114	6205	5528	4360	3621
3621					
Camrose County #22	17200	17722	18605	18251	19493
20920					
Cities:					
Camrose	5817	6939	8362	8673	10104
11210					
Towns:					
Bashaw	597	614	697	757	773
870					
Villages:					
Bawlf	287	203	220	182	207
298					
Bittern Lake	45	76	80	100	91
140					
Edberg	167	179	167	145	140
140					
Ferintosh	195	174	156	127	135
166					
Hay Lakes	193	233	196	211	236
287					
New Norway	273	263	220	200	276
261					
Rosalind	0	0	222	203	187
186					
Residual:	9626	9041	8285	7653	7344
7362					
Vermilion R Cty #24	14879	15139	15919	15590	16718
19230					
Cities:					
Lloydminster	2506	2944	3767	4738	5818
7532					
Towns:					
Vermilion	2196	2449	2685	2915	3182
3455					
Villages:					
Dewberry	0	179	198	160	161
164					
Kitscoty	283	326	364	320	391
501					
Paradise Valley	337	379	351	351	376
450					
Residual:	0	0	174	144	144
161					
9557					
8862					
8380					
6962					
6646					
6967					



Place	POPULATION				
	1956	1961	1966	1971	1976
Minburn Cty #27	10510	10307	10447	9722	9924
Towns:					
Vegreville	2574	2908	3598	3691	4158
Villages:					
Innisfree	318	291	314	252	265
Lavoy	127	131	118	114	115
Mannville	599	632	683	646	681
Minburn	150	164	143	106	125
Residual:	6742	6181	5591	4913	4580
Lamont County #30	10066	9136	8269	7338	7433
Towns:					
Lamont	632	705	835	899	997
Mundare	650	603	564	511	555
Villages:					
Andrew	602	601	525	466	486
Bruderheim	290	299	290	350	484
Chipman	192	174	183	181	296
Residual:	7700	6754	5872	4931	4615
Elk Is. Nat Park	56	69	63	46	33
CENSUS DIVISION #11	321753	408967	473498	549955	628081
Cities:					
Edmonton	246561	320958	376925	438152	461361
M D 90 Sturgeon	16599	23547	27606	25697	41936
Cities:					
St. Albert	1320	4059	9736	11800	24129
Towns:					
Gibbons	0	192	230	551	1093
Morinville	957	935	995	1475	2097
Villages:					
Bon Accord	0	0	147	332	882
Legal	457	524	572	563	874
Residual:	13865	17837	15926	10976	12861
					14995





Place	POPULATION				
	1956	1961	1966	1971	1976
Wetaskiwin Cty #10	14523	14573	15008	14888	15950
Cities:					
Wetaskiwin	4476	5300	6008	6267	6754
Villages:					
Millet	427	403	418	456	762
Residual:	9620	8870	8582	8165	8434
Stratcona Cty #20	11455	15047	20337	31461	50582
Towns:					
Ft Saskatchewan	2582	2972	4152	5726	8304
Residual:	8873	12075	16185	25735	42278
Leduc County # 25	16334	16511	16650	18441	25792
Towns:					
Calmar	730	700	600	799	872
Devon	1429	1418	1283	1468	2786
Leduc	2008	2356	2856	4000	8576
Villages:					
Breton	0	428	447	352	424
New Sarepta	0	184	173	202	237
Thorsby	411	491	583	595	657
Warburg	257	285	407	464	408
Residual:	11499	10649	10301	10561	11832
Parkland Cty #31	16281	18331	16972	21316	32460
Towns:					
Drayton Valley	2588	3854	3352	3900	4303
Spruce Grove	309	465	598	3029	6907
Stony Plain	1098	1311	1397	1770	2717
Villages:					
Entwistle	354	411	345	353	380
Residual:	11932	12290	11280	12264	18153

23398



Place	POPULATION					
	1956	1961	1966	1971	1976	1979
CENSUS DIVISION #12	41417	44081	46931	50803	58889	71771
I D 18	10606	11602	13498	17643	26117	36698
Towns:						
Fort McMurray	1110	1186	2614	6847	15424	25802
Lac La Biche	967	1314	1490	1791	1954	1991
Villages:						
Plamondon	0	0	195	189	228	236
Residual:	8529	9102	9199	8816	8511	8669
M D 87 Bonnyville	12964	15060	16587	17273	17196	18409
Towns:						
Bonnyville	1495	1736	2237	2587	2885	3699
Cold Lake	1097	1307	1289	1309	1317	1585
Grand Centre	0	1493	1731	2088	2780	2829
Villages:						
Glendon	314	315	350	354	370	431
Residual:	10058	10209	10980	10935	9844	9865
St Paul county #19	10802	10936	10979	10735	10587	11438
Towns:						
St Paul	2229	2823	3543	4161	4337	4710
Elk Point	594	692	726	729	807	1012
Residual:	7979	7421	6710	5845	5443	5716
Smoky Lake Cty #13	6902	6397	5636	4966	4790	5027
Towns:						
Smoky Lake	563	626	871	881	925	1121
Villages:						
Vilna	374	400	344	303	348	372
Warspite	159	153	119	110	92	92
Waskatenau	289	305	274	233	271	288
Residual:	5517	4913	4028	3439	3154	3154
Wood Buffalo N Park	143	86	231	186	199	199



Place	1956	1961	1966	1971	1976	1979
CENSUS DIVISION # 13	44335	46220	45536	45857	47958	50167
I D # 15	2474	4257	4552	5329	6277	7154
Towns:						
Whitewater Villages:	0	1054	2279	3202	3878	4758
Ft Assiniboine	0	216	187	173	185	182
Residual:	2474	2987	2086	1954	2214	2214
M D 92 Westlock	10088	9961	10319	10297	10645	10944
Towns:						
Westlock Villages:	1136	1838	2685	3246	3721	3824
Clyde	221	259	256	233	312	400
Residual:	8731	7864	7378	6818	6612	6720
Thorhild County # 7	7152	6726	5953	5844	5947	5848
Towns:						
Redwater Villages:	1065	1135	1041	1287	1493	1767
Radway	203	183	158	170	169	218
Thorhild	288	312	430	509	533	539
Residual:	5596	5096	4324	3878	3752	3324
Barrhead County #11	7554	8045	8059	7832	8092	8576
Towns:						
Barrhead	1610	2286	2592	2803	2944	3428
Residual:	5944	5759	5467	5029	5148	5148
Athabasca Cty #12	8964	8625	8135	7836	7741	7896
Towns:						
Athabasca Villages:	1293	1487	1551	1765	1759	1878
Boyle	304	346	437	460	576	612
Residual:	7367	6792	6147	5611	5406	5406



Place	1956	1961	1966	1971	1976	1979
Lac Ste Anne Cty #28 8103		8606	8518	8719	9256	9749
Towns:						
Mayerthorpe	563	663	916	1036	1018	1360
Villages:						
Onaway	190	302	375	496	444	500
Sangudo	331	325	314	360	409	434
Residual:	7019	7316	6913	6827	7385	7455
CENSUS DIVISION # 14	14153	15877	16845	17136	19386	21604
I D # 14	14153	15877	16845	17136	19386	21604
Towns:						
Edson	2560	3198	3788	3818	4038	5403
Hinton	0	3529	4307	4911	6731	7412
Villages:						
Evansburg	358	452	472	528	671	744
Wildwood	547	479	403	386	360	459
Residual:	10688	8219	7875	7493	7586	7586
CENSUS DIVISION # 15	69902	76811	87346	93550	103325	112599
I D # 16	3987	4561	5390	9729	12018	12511
Towns:						
Fox Creek	0	0	0	1281	1625	1811
Grande Cache	0	0	0	2525	4116	4423
Valleyview	973	1077	1827	1708	1716	1716
Residual:	3014	3484	3563	4215	4561	4561
I D # 17	15007	16523	17918	17610	19590	20521
Towns:						
High Prairie	1743	1756	2241	2354	2281	2281
Slave Lake	0	468	1716	2052	3561	3821
Swan Hills	0	643	1414	1376	2012	2553
Villages:						
Kinuso	306	323	376	267	305	305
Nampa	0	271	288	283	286	352
Residual:	12958	13062	11883	11278	11145	11209





Place	POPULATION				
	1956	1961	1966	1971	1976
I D # 19	3133	2897	2830	2641	2270
Villages:					
Eaglesham	0	0	0	218	229
Wanham	0	251	235	268	225
Residual:	3133	2646	2595	2155	1816
I D # 20	2633	2505	2792	2730	2667
Residual:	2633	2505	2792	2730	2667
I D # 21	2995	3170	3797	3598	3151
Villages:					
Hines Creek	360	398	418	438	503
Residual:	2635	2772	3379	3160	2648
I D # 22	4215	4090	4430	4280	4182
Towns:					
Manning	726	896	1179	1071	1050
Residual:	3489	3194	3251	3209	3132
I D # 23	3256	4276	5670	6157	7761
Towns:					
High Level	0	0	708	1614	1562
Rainbow Lake	0	0	0	355	434
Residual:	3256	4276	4962	4188	5765
M D # 130 Smoky R	6872	7285	7526	7273	6910
Towns:					
Falher	1260	1506	1884	2109	2248
McLennan	1092	1078	1104	1090	1133
Villages:					
Donnelly	265	289	249	274	278
Girouxville	300	318	305	347	303
Residual:	3955	4094	3984	3453	2948



Place	POPULATION					
	1956	1961	1968	1971	1976	1979
M D # 133 Spirit R	2580	2708	2816	2604	2410	2415
Towns:						
Spirit River	743	890	1034	1091	1020	1020
Villages:						
Rycroft	424	500	539	461	533	538
Residual:	1413	1318	1243	1052	857	857
M D # 135 Peace	5012	6038	8116	8851	8521	9746
Towns:						
Grimshaw	904	1095	1376	1714	1665	1950
Peace River	2034	2543	4087	5039	4840	5692
Villages:						
Berwyn	342	347	430	474	433	521
Residual:	1732	2053	2223	1624	1583	1583
M D # 136 Fairview	3145	3423	3629	3724	4003	4826
Towns:						
Fairview	1260	1506	1884	2109	2248	3027
Residual:	1885	1917	1745	1615	1755	1799
Grande Pr. Cty #1	17067	19335	22432	24353	29842	33622
Cities:						
Grande Prairie	6302	8352	11417	13079	17626	20427
Towns:						
Beaverlodge	768	897	1083	1157	1332	1645
Hythe	481	449	445	487	460	504
Sexsmith	345	531	491	559	770	1064
Wembley	272	303	299	348	507	835
Residual:	8899	8803	8697	8723	9147	9147



APPENDIX C

URBAN, RESOURCE AND AGRICULTURE REGIONS

OF

ALBERTA



## REGIONS

Percent of Labour Force  
in Agriculture, 1971.

Urban:	
Calgary	0.6
Foothills, M.D.#31	31.7
Rockyview, M.D.#44	32.7
Edmonton	0.5
Strathcona	10.6
Parkland, Co.#31	20.1
Sturgeon, M.D.#90	16.0
Grande Prairie	1.4
Grande Prairie, Co.#1	38.8
Lethbridge	2.5
Lethbridge, Co.#26	35.0
Red Deer	0.7
Red Deer, Co.#23	37.6
Medicine Hat	4.2
I.D.#1	44.8
Resource:	
CO.#3, Ponoka	33.3
CO.#4, Newell	35.8
CO.#6, Stettler	38.4
CO.#10, Wetaskiwin	34.0
CO.#14, Lacombe	36.2
CO.#17, Mountain View	35.9
CO.#19, St. Paul	34.2
CO.#22, Camrose	30.6
CO.#24, Vermilion River	34.2
CO.#25, Leduc	34.2
CO.#28, Lac Ste. Anne	39.5
M.D.#9, Pincher Creek	26.4
M.D.#14, Taber	36.4
M.D.#26, Willow Creek	29.6
M.D.#48, Kneehill	39.5
M.D.#61, Wainwright	33.7
M.D.#87, Bonnyville	13.3
M.D.#130, Smoky River	37.6
M.D.#133, Spirit River	27.2
M.D.#135, Peace	10.5
M.D.#136, Fairview	23.1
I.D.#4, Waterton Nat'l Park	0.0
I.D.#6	2.0
I.D.#7	0.2
I.D.#8	4.6
I.D.#9 Banff Nat'l Park	0.0





## REGIONS

Percent of Labour Force  
in Agriculture, 1971.

I.D.#10	29.5
I.D.#12, Jasper Nat'l Park	0.6
I.D.#13, Elk Island Nat'l Park	0.0
I.D.#14	12.6
I.D.#15	16.5
I.D.#16	13.7
I.D.#17	17.8
I.D.#18	15.2
I.D.#22	39.8
I.D.#23	25.1
I.D.#24 Wood Buffalo Nat'l Park	0.0
S.A.#2	39.7
Agriculture	
CO.#2, Vulcan	54.0
CO.#5, Warner	48.0
CO.#7, Thorhild	43.1
CO.#8, Forty Mile	55.7
CO.#9, Beaver	49.9
CO.#11, Barrhead	42.0
CO.#12, Athabasca	43.8
CO.#13, Smoky Lake	51.2
CO.#16, Wheatland	51.8
CO.#18, Paintearth	44.4
CO.#21, Two Hills	54.2
CO.#27, Minburn	45.1
CO.#29, Flagstaff	44.4
CO.#30, Lomont	52.9
M.D.#6, Cardston	44.1
M.D.#34, Acadia	65.3
M.D.#47, Starland	58.6
M.D.#52, Provost	42.8
M.D.#92, Westlock	41.8
I.D.#19	57.9
I.D.#20	59.7
I.D.#21	47.7
S.A.#3	54.5



## APPENDIX D

## THE FIFTY FARM CITIES OF ALBERTA



# THE FIFTY FARM CITIES OF ALBERTA

Athabasca  
 Banff\*  
 Barrhead  
 Blairmore(Crowsnest Pass)  
 Bonnyville  
 Brooks  
 Calgary  
 Canmore  
 Cardston  
 Claresholm  
 Coronation  
 Drayton Valley  
 Drumheller  
 Edmonton  
 Edson  
 Fairview  
 Fort MacLeod  
 Fort Saskatchewan  
 Grande Prairie  
 Hanna  
 High Prairie  
 High River  
 Hinton  
 Innisfail  
 Jasper\*  
 Lacombe  
 Ledue  
 Lethbridge  
 Medicine Hat  
 Olds  
 Oyen  
 Peace River  
 Pincher Creek  
 Ponoka  
 Provost  
 Red Deer  
 Rimbey  
 Rocky Mountain House  
 Stettler  
 St. Paul  
 Taber  
 Three Hills  
 Vegreville  
 Vermilion  
 Viking



# THE FIFTY FARM CITIES OF ALBERTA

Vulcan  
Wainwright  
Wetaskiwin  
Westlock  
Whitecourt

Source: Zimmerman & Moneo, The Prairie Community System.  
\* Jasper & Banff were eliminated from analysis due to  
their location within the National parks restrictive  
development zone.













DATE DUE


THESIS

c.2

1981

AUTHOR

Hornbrook, Robert

Population Change in Alberta,

TITLE

1956-1979

DATE  
DUE

BORROWER'S NAME

ROOM  
NUMBER

DATE DUE



